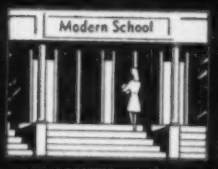
SCHOOL PROGRESS

THE NATIONAL BUSINESS MAGAZINE OF CANADIAN SCHOOLS



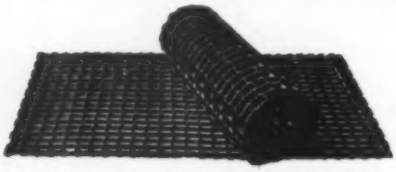
No. 6 DECEMBER 1958

MacEacherns' *have it!*

Yes! we have

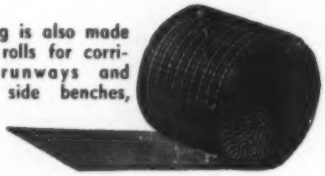
STEEL MATTING

★ *made to your own specifications*



Matting is reversible, may be used on either side and can be rolled up like a rug.

Matting is also made up in rolls for corridors, runways and along side benches, etc.



Save Floors . . .

with this rugged link matting . . . it's galvanized and rust proof—the practical matting for entrances to schools the year 'round.

The linked edges form a top scraping surface which removes all foreign abrasive material, sand, snow, etc., from pupils' shoes . . . which then drop through the crevices to the floor. Mat can be rolled up for immediate sweeping.

MATS & MORE MATS!

No matter what your requirements are in matting, MacEacherns' have them . . .

- ★ WOOD LINK
- ★ COCOA MATS
- ★ BAR MATS
- ★ RIBBED RUBBER RUNNER
- ★ RUBBER LINK
- ★ TIRE FABRIC LINK

★ BEAU-DURO—all rubber moulded link matting in six brilliant colours, designs and patterns to your own specifications.

NEW ! !

★ **PNEU-MAT . . . strip weave tire fabric . . . no wire . . . no holes . . . ideal for golf clubs.**

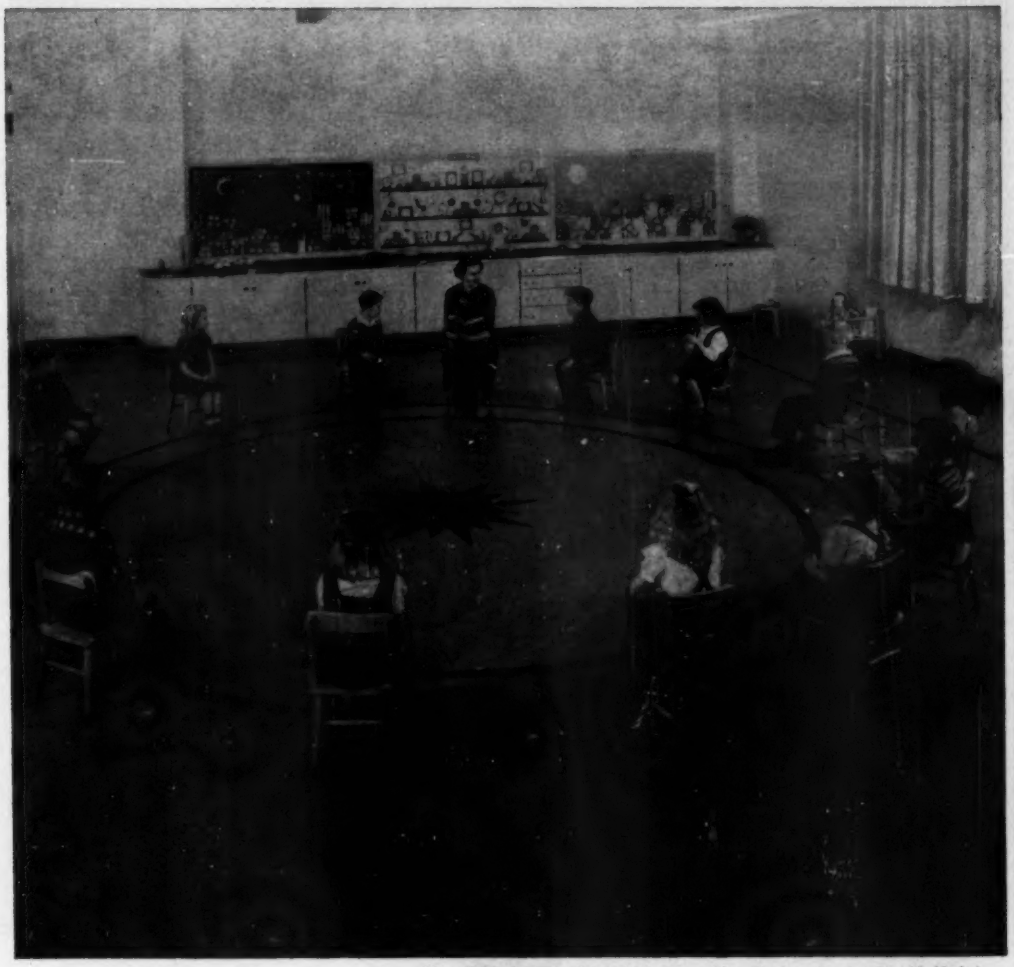
★ **PERFO Rubber Mats . . . Now available in Canada . . . custom built . . . corrugated and perforated . . . six colours . . . carry your own advertising . . . made only to order.**

Write to-day for descriptive folder

Gordon A MacEachern

FLOOR FINISHING SPECIALISTS

TORONTO HAMILTON PORT ARTHUR BELLEVILLE LONDON



The school classroom floor gives you an idea of what you can do with Marboleum. Alphabets can be inset and playing courts defined. Marboleum is versatile and the ideal flooring for schools, hospitals, institutions.

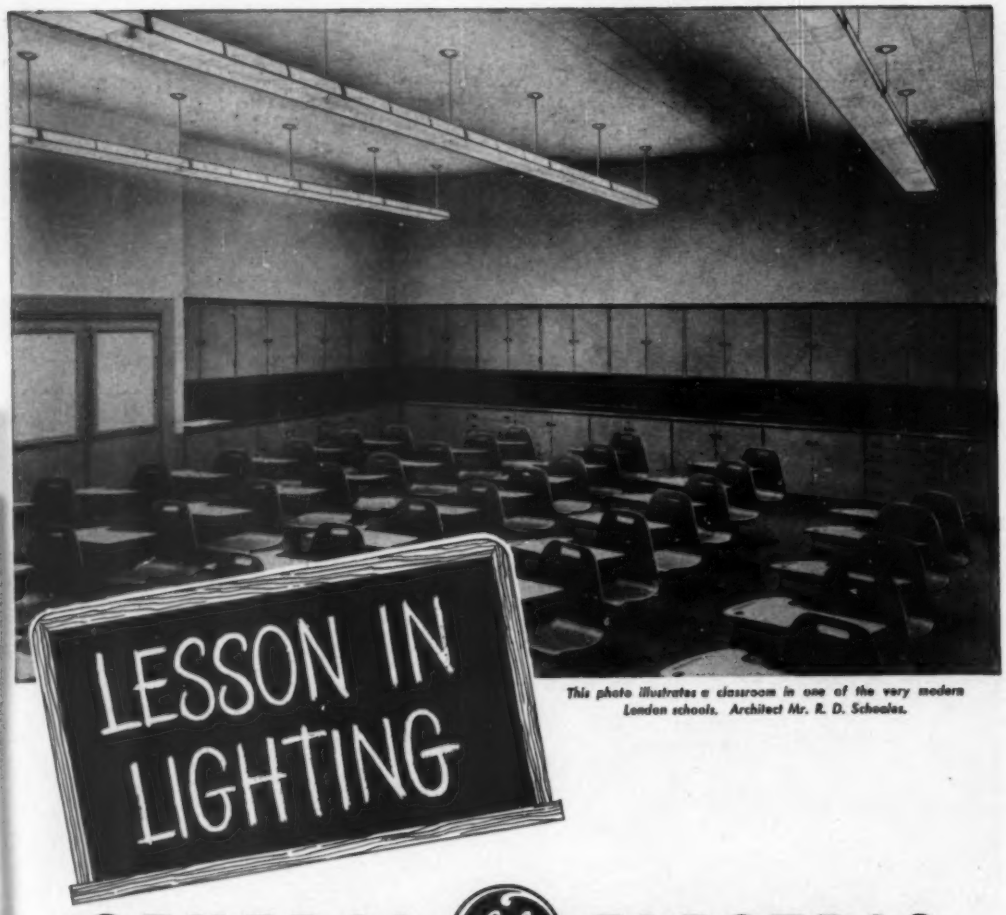
TIME TESTED FOR ANY WEAR...ON ANY FLOOR...AN

Put your floors to work. With Marboleum or Dominion Battleship Linoleum, they can be designed to fit in with school work, by including motifs of appropriate school designs. The economy of Dominion Linoleum floors—through lasting beauty, resilience, low maintenance cost and ease of cleaning—has been proved by over forty years' service on the floors of Canadian schools, office buildings, hospitals, stores. Ask your architect or dealer to show you the wide selection of Marboleum colours available.

In tiles or by the yard . . . a product of

DOMINION OILCLOTH & LINOLEUM COMPANY LIMITED

Montreal **Established 1872**



This photo illustrates a classroom in one of the very modern London schools. Architect Mr. R. D. Scheales.

GENERAL ELECTRIC

LIGHTING SERVICE

Here are three important points to remember when considering school lighting: that you are really investing in illumination, not just buying fixtures . . . that determining the exact quantity of illumination to fit your needs is the job of a trained Lighting Engineer . . . and finally, that a carefully-engineered installation costs little more, yet pays dividends in satisfactory lighting and trouble-free performance.

That's why it is to your own best interest to employ Architects and Consulting Engineers who utilize the principles of good lighting as exemplified by General Electric Lighting Service Department. For further information contact your nearest C-G-E office.

CANADIAN GENERAL ELECTRIC COMPANY
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SCHOOL PROGRESS

THE NATIONAL BUSINESS MAGAZINE OF CANADIAN SCHOOLS

Vol. XX DECEMBER, 1951 No. 6

Although we do not necessarily agree with all statements made in the columns of "School Progress", we believe that they are of sufficient interest and importance to bring to the attention of readers.—The Editor.

Editor ..... **Harry F. Coles, B.A.**

Editorial and Business Offices ..... **57 Bloor St. West, Toronto, Ont.**

SCHOOL PROGRESS is an independent publication, for principals, headmasters, inspectors, school board chairmen, secretaries, business administrators and purchasing agents, building superintendents, school architects, superintendents, secretaries and directors of education, and school supply houses throughout Canada.

Authorized as second class matter by the Post Office Department at Ottawa, Canada, 1932.

Subscription Rates

$2.00 a year—single copies and all extra copies 35c. each

THE SPOTLIGHT ON EDUCATION

Conducted by the Editor

Dr. W. A. MacKenzie, Deputy Minister of Finance in the Federal Government during World War II was installed as Principal of Queens University on October 19th.

Dr. R. C. Wallace, retired Principal of Queens University, has been appointed University Grants advisor to the Ontario Department of Education.

The Hon. Lester B. Pearson, Federal Minister of External Affairs, has been appointed Chancellor of Victoria University, Toronto.

Dr. Robert Warren, former high school Inspector in Alberta and Assistant Superintendent of Schools, has been appointed Superintendent of Calgary Schools to succeed Dr. F. G. Buchanan, retired.

Mr. A. J. Watson, for twenty-seven years Superintendent of the Lethbridge School District in Alberta, has retired. He will continue his connections with the district board, however, as Secretary-Treasurer.

Mr. L. H. Bussard has been named Superintendent of the Lethbridge School District to succeed Mr. Watson.

Dr. Hubert McIntosh, Superintendent of Winnipeg Schools, has been appointed Chief Executive Officer of the reorganized Winnipeg School District No. 1, Manitoba.

Dr. Maxwell A. Cameron, Professor of Education and Director of the School of Education, University of British Columbia, and widely known for his "Cameron Report" on school finances in British Columbia, died recently in Vancouver.

Owen Williams, for forty-one years Superintendent of School Division No. 7 in Alberta, retired in September.

Charles W. Jefferys, noted Canadian historical artist, and author of "The Picture Gallery of Canadian History" (Ryerson) in three volumes, died on October 8th in Toronto at the age of eighty-two.

Dr. Willard W. Beatty, who for fifteen years directed Indian education in the United States from Alaska to Florida, has been named to head the World Campaign of UNESCO against illiteracy.

Dr. John A. Lang, Director of Research, Ontario College of Education, Toronto, has been named Chairman of the Forest Hill Village Board of Education, suburban Toronto.

Mr. G. A. Pearson, Assistant Superintendent of Elementary Education, has been appointed Superintendent to succeed Mr. C. F. Cannon, now Deputy Minister of Education for the province of Ontario.

John C. Dryden, a former Minister of Education for the province of Manitoba, died at Deer Lodge Hospital, Manitoba, on October 15th at the age of fifty-three.

Howard F. Hines, Secretary-Treasurer, Board of School Trustees, Vancouver, B.C.

Harry G. Turner, Secretary-Treasurer, Board of Education, Edmonton, Alta.

F. A. Allden, Secretary-Treasurer, School Board, Winnipeg, Man.

Frank E. Christiansen, Secretary-Treasurer, Board of School Trustees, Saint John, N.B.

L. W. Luwood, Chief Purchasing Officer, Protestant School Board, Montreal, Que.

L. A. Brooks, Comptroller, Protestant School Board, Montreal, Que.

D. R. Ranger, Director of Mechanical Equipment, Protestant School Board, Montreal, Que. From outside the province of Ontario, attended the International Convention of the American Association of School Business Officials, held in Toronto, October 15th to 18th.

VICEROY
RUBWOOD
5 PLY CORE
TOILET SEAT

FOR OVER A QUARTER CENTURY

Throughout Canada...
and all over the world

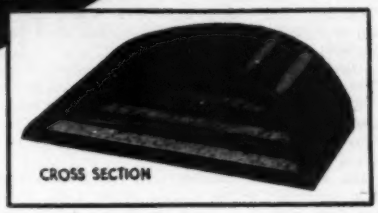
Viceroy Rubwood Toilet Seats have been installed in

HOTELS . . . SCHOOLS . . . HOSPITALS . . . STORES . . .
FACTORIES...RAILROAD COACHES...SHIPS...and HOMES

where severe *use* and *abuse* and lasting sanitary qualities are essential requirements. It has been established that they

Give LIFETIME SERVICE

Experience has Proven that
FIRST COST is invariably LAST COST



Long life, maximum sanitary qualities, and low maintenance cost give Viceroy Rubwood Toilet Seats value that endures. Once installed, they require virtually no attention. They can be thoroughly cleaned with soap and water. They are not affected by acids, and withstand the strongest disinfectants. They retain their rich finish and high sanitary features indefinitely.

Five layers of plywood . . . placed with grain crossed . . . bonded together with rubber under tremendous heat and pressure form the core of Viceroy Rubwood Toilet Seats . . . a core that even under more than average abuse will not warp, twist, crack or break.

When the thick, hard rubber cover is vulcanized on this core it forms a unit that is practically indestructible. Polished to mirror smoothness, Viceroy Rubwood Toilet Seats do not absorb moisture or odors, and are therefore highly sanitary.

Specify
VICEROY
RUBWOOD
5 PLY
HARD RUBBER
COVERED SEATS
with
RUBBER COVERED FITTINGS

Guaranteed for 25 YEARS

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Whatever the Requirement there's a CRANE VALVE for dependable service

No. 465½ Iron Body Wedge Gate Valve with Rising Stem

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Globe, Angle, Gate or Check—of brass, iron, steel or special alloy—for steam, water, air, oil, gas or other lines—in the complete Crane line there's the right size and type of valve to meet every specific requirement.

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Your nearest Crane Branch can specify and supply a valve, fitting or piping component for whatever service you encounter.

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HANDY SELECTION CHART • SCREWED BRASS VALVES

MAXIMUM WORKING PRESSURE (See Note)	GLOBE AND ANGLE VALVES						GATE VALVES		CHECK VALVES	
	Composition Disc		Regrinding Disc		Plug Type Disc					
	Globe	Angle	Globe	Angle	Globe	Angle	Rising Stem	Non-Rising Stem	Lift	Swing
100	1204	1205	•	•	•	•	•	410	1212	•
125	•	•	1	2	•	•	440	438	20	34
150	7	7	•	•	14½P	16½P	431	438½	27	•
200	212C	214C	70	70	14½MP	16½MP	422	458	218	35
250	•	•	•	•	14½HP	16½HP	•	•	•	•
300	•	•	370E	370E	382P	384P	622E	624E	366E	74E

NOTE—*These are steam ratings; when selecting any valve, service and usage must be considered, which often dictates the choice of a valve nominally rated for higher pressure.* *Where specific valve not listed, select valve in next higher pressure rating.

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THE SPOTLIGHT ON EDUCATION . . . . . .

Schools and Parks

At a recent meeting of the Ontario Planning Conference, a resolution was passed deploring the fact that educational authorities are not making sufficient allowance for parks and recreation in planning their new school developments. The meeting called for a link between park and school planning, and went on record as agreeing unanimously that each elementary school requires 10 to 15 acres of recreational and park land, each junior high school needs 20 to 25 acres, and each senior high school needs between 20 and 30 acres of land.

Calgary Division, University of Alberta

This fall the University of Alberta opened a Calgary Division with an initial enrolment of 200 freshman students. Freshmen in green and gold skullcaps were seen in downtown Calgary for the first time, a huge bonfire blazed in the suburbs, a new college newspaper called "Calvar" made its debut, and a football squad turned out for practice on a "campus" in the north end of Calgary.

Quarters are, of course, at present of the very temporary variety. Some classes have already overflowed into air force buildings in the area, but a start has begun and Calgary now has its Varsity.

Toronto Inaugurates New Type Report Card

Designed to do a better job for both pupils and parents, new report cards will be used in all Toronto public schools in classes up to grade eight.

The new type card will show, rather than marks achieved in individual subjects, the letters "O" for outstanding, "S" for satisfactory, and "U" for unsatisfactory.

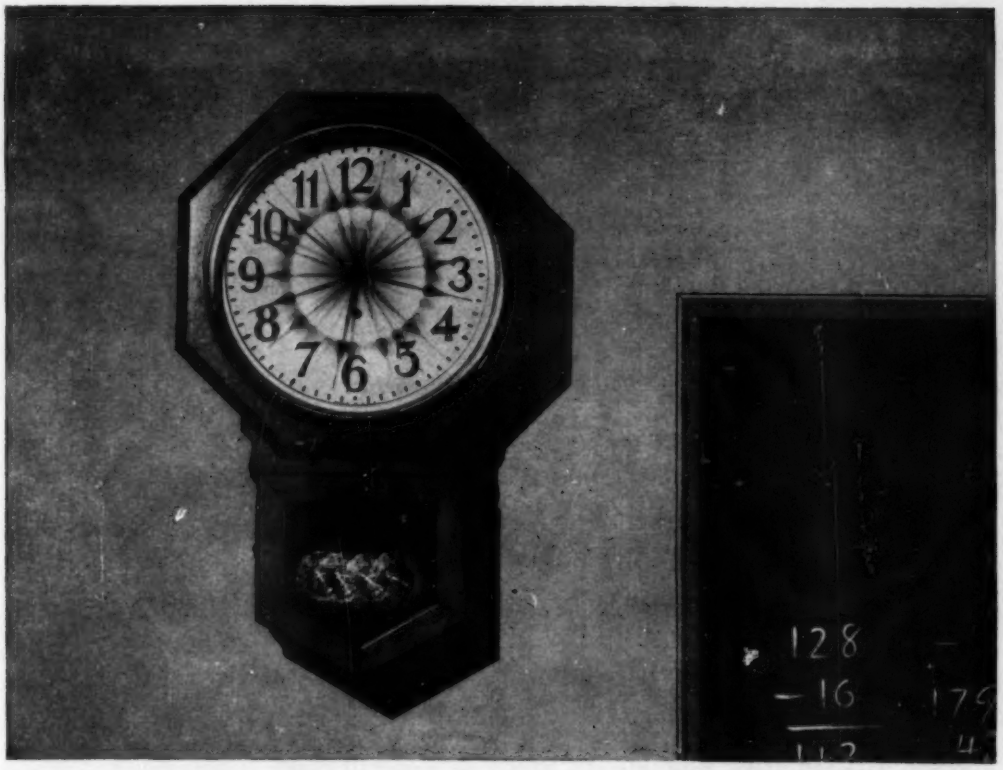
The same letters also will indicate pupils' progress in personality development, attitudes and sense of responsibility. They will not, however, indicate an official category of standing. For instance, one pupil who earns 65 per cent in a subject may find himself marked "U" because the work was below his known ability. On the same mark another student would win an "O" because he exceeded what was thought to be his ability level.

The new cards will make it clear to parents that their children are not being compared to other children, but are marked in relation to their own ability. It is believed marks by themselves do not give an accurate picture of a pupil's progress either to himself or his parents.

Post-Graduate Scholarships in Physical Education

Mr. J. H. Ross, acting chairman of the National Council on Physical Fitness, Ottawa, has announced that Scholarships valued at $6,000 for post-graduate study in physical education, recreation or physical medicine are to be awarded this year by the Council.

Set up three years ago to help overcome the scarcity of professional personnel with advanced training in physical education and recreation, the scholarships are for post-graduate study only and are restricted to Canadians



Will Your New School Make Clocks "*Run Faster*"?

Of course, no school building can *literally* speed up the march of time.

But put your students in the right kind of surroundings—and the clocks will *seem* to run faster. Because your students will be more alert, more interested, more responsive—and that means they'll make faster progress.

Experience shows, for example, that most children's interest level stays higher longer when they're moved from stuffy, overheated surroundings to classrooms in which level temperatures, adequate fresh air and proper humidity are constantly provided.

Knowing this, more and more school officials are insisting on modern Honeywell automatic controls for their new schools. Honeywell equipment has been *proved* more accurate, more dependable. Honeywell controls are simpler, too—consistently cost less to maintain. And Honeywell serves you with the largest, most widespread staff of control experts in the industry.

You owe it to your students *and* your budget to get all the facts and figures about Honeywell controls for *your* new school. It's easy to do. Simply call your local Honeywell office. Or write Minneapolis Honeywell Regulator Co. Ltd., Leaside, Toronto 17. Why not do it *today!*

MINNEAPOLIS **Honeywell**

First in Controls

OFFICES IN HALIFAX • QUEBEC • MONTREAL • OTTAWA • HAMILTON • LONDON • WINDSOR • WINNIPEG • CALGARY • EDMONTON • VANCOUVER

PUT AN END TO NEEDLESS NOISE!

There's no need to endure "nerve-wracking" noise when it costs so little to stop it with

Johns-Manville Acoustical Materials

NEW HEAD OFFICE, BANK OF MONTREAL. Situated on one of Toronto's heaviest traffic intersections and flanked on two sides by double-track tram lines, it is under a constant bombardment of strident noises. Yet within its walls the contrasting hush is astonishing. A gratifying example of Johns-Manville Acoustical Materials' efficiency. A-332

Scientific study sets the yearly cost of noise in high figures. In comparison, cost of noise control through J-M Acoustical Materials is very low. Thus, such an investment can prove highly profitable.

Johns-Manville has been engaged in practical methods of sound control for over 37 years, specializing in both the manufacture and application of materials expressly developed for that purpose.

And while sound control is their first function, all J-M Acoustical Materials are also designed to smarten the appearance of interiors wherever applied.

To help choose the right type of J-M Acoustical Materials for your requirements, write for free booklet, "Sound Control", to Canadian Johns-Manville, Dept. 1184, 199 Bay St., Toronto, Ont.

JOHNS-MANVILLE JM PRODUCTS

Johns-Manville

PIONEERS IN SOUND CONTROL

who have had at least three years' full-time experience in physical education or recreation in Canada, including at least one year's experience since obtaining an undergraduate degree.

The total value of the scholarships this year has been increased from $4,000 to $6,000. No award may be made for more than $1,200 or for less than $300. Deadline for applications is January 15, 1952.

In awarding the scholarships, consideration will be given to the suitability of the candidate's proposed study in view of the work in which he will be employed and its contribution to his professional competence. Scholarship winners must agree to return to Canada to work for at least two years.

Application forms are obtainable from provincial government fitness or recreation offices or from the National Council's office in the Department of National Health and Welfare, Ottawa.

Toronto Considers the Rental of High School Text Books

Following the lead of British Columbia, the first province to organize a system of text book rentals, the Toronto Board of Education proposes to inaugurate a plan to rent text books to secondary school students instead of requiring them to buy the books as they now must. The B.C. plan was started in 1949 for grades 7 to 13. It is voluntary, and pupils may still purchase their own texts if they wish, but during the first year of the plan 80% of the pupils took part, and this year almost 100% rented their books instead of buying them. The required books which might cost up to $30. to buy are rented for $4. a year which, it is suggested, would save Toronto's 20,000 secondary school students $26.00 each, a total of $520,000. a year.

During its first year the B.C. government voted a subsidy of $200,000. to inaugurate the scheme, but not all of it was needed. During the second year a subsidy of $65,000. was required, and this year, it is expected that $125,000. will be sufficient to balance the account.

Pen Friends Overseas for Canadian Students

The Overseas Correspondence Department of the United Nations Association in Canada invite Canadian boys and girls, fifteen years or over, to send their name, address, age, interest and country with which they wish to correspond, direct to Mrs. R. T. Tanner, Overseas Correspondence Department, United Nations Association, 678 Huron Street, Toronto. Arrangements will be made for correspondence with students of equal age in the following countries: Great Britain, Australia, New Zealand, France, Belgium, United States, Switzerland, Sweden, Norway, Italy, Germany, Brazil, The Netherlands, Finland, Japan, Denmark, Austria, Indonesia, Spain, India.

Students from 12 to 15 years old may arrange to correspond with students in the following countries only: Britain, Australia, New Zealand, France, Austria and the United States.

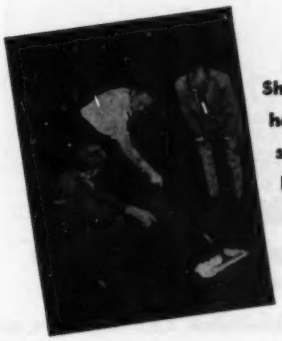
DUST IS EXPENSIVE

UNCONTROLLED DUST that 'gets by' old-fashioned floor care . . . *spreads* air-borne bacteria that may cause absenteeism . . . *redeposits* itself in bins, shelves, finished products where it must be removed again . . . *tracks* into clean areas and makes floor surfaces unsightly and insanitary!

WESTONE CONTROLS DUST. Inexpensively. It's an antiseptic floor treatment. Inhibits the growth of certain bacteria right at the source. Loosens and picks-up all dust. Seals surfaces. Holds subsequent dust down for quick, easy removal. Keeps bins clean. Speeds materials handling. Reduces floor maintenance costs up to 50%. As a WEST representative can easily demonstrate. Without charge.

WESTONE an antiseptic *DUST CONTROL* floor treatment.

WEST DISINFECTING Co. Ltd.



Show me how to save money by controlling floor dust

West Disinfecting Co., Ltd., 5621-23 Casgrain Avenue, Montreal, Quebec
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Gentlemen: I'd like to have a local WEST representative come out and give me a demonstration of Antiseptic WESTONE dust control. On this date.....

Mr.... Position.....

Company.....

Address.....

City..... Province.....

24

shuffling shoes....scuffling shoes...

"TILE-TEX" CAN TAKE IT!

A typical "Tile-Tex" School Installation.

■ Kindergarten . . . class room . . . corridor . . . entrance floor . . . Any floor, in any school will look better and last longer when Tile-Tex Asphalt Floor Tile is on the job.

■ For toughness you can't beat Tile-Tex. It can take hard, heavy foot traffic for years on end without visible sign of wear.

■ You'll have attractive floors. Tile-Tex is lustrous, snug-fitting and colourful. A wide range of clear, true colours are available to stimulate or rest, suggest warmth or simulate coolness.

■ You'll have quiet and resilient floors . . . floors that are sanitary, easy to clean and to keep clean. A daily sweeping, periodic mopping or waxing are all that are necessary.

■ You'll enjoy economy too. Material cost of Tile-Tex is low; installation is fast and simple and Tile-Tex floors are so durable, maintenance cost is kept to a minimum.

■ Write today for complete information on Tile-Tex Asphalt Tile and its especial suitability for school flooring.

Tile-Tex
ASPHALT
FLOOR TILE

THE FLINTKOTE COMPANY OF CANADA LIMITED
30th Street, Long Branch, Toronto 14

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C-I-L COLOUR CONDITIONING

Transforms School Classrooms

Swansea Public School in York Township near Toronto is an outstanding example of how the effective use of colour can add life and brightness to a comparatively old school building.

Eight classrooms have been re-decorated according to C-I-L Colour Conditioning principles, and provide a cheerful, refreshing contrast to their former appearance.

Ceilings and walls are finished in C-I-L FLAT WALL PAINT and C-I-L SEMI-GLOSS ENAMEL . . . radiators, doors, cupboards, dado and other trim in C-I-L DADO ENAMEL.

Art Room ceiling is C-I-L FLAT WALL STYLIST Golden Yellow No. 203; walls, window sash and frames C-I-L SEMI-GLOSS Lightone Grey No. 1866; doors and other trim C-I-L DADO ENAMEL Grey No. 1871

Bright, lively colours characterize this classroom for young children. Ceiling and walls above blackboards are finished in C-I-L FLAT WALL PAINT (one part Peach No. 233 and one part White No. 100); dado, doors and trim in C-I-L SEMI-GLOSS ENAMEL (one part Sunshine No. 425 and one part Wedgwood Blue No. 430).

This classroom ceiling is finished in C-I-L FLAT WALL White No. 100. Blackboard wall is C-I-L SEMI-GLOSS Lightone Grey No. 1866; other walls, window sash and mouldings C-I-L SEMI-GLOSS, equal parts Sunshine No. 425 and White No. 400; dado, radiators, doors and other trim C-I-L DADO ENAMEL Grey No. 1871.

C-I-L ADVISORY SERVICE

The Paint and Varnish Division of CANADIAN INDUSTRIES LIMITED welcomes the opportunity to assist in developing colour treatments and suggesting suitable products. Write or phone your nearest C-I-L District Office. *Halifax, Montreal, Toronto, Winnipeg, Regina, Saskatoon, Calgary, Edmonton, Vancouver.*

C-I-L PAINTS

CANADIAN INDUSTRIES LIMITED • MONTREAL

"Serving Canadians through Chemistry"

THE SPOTLIGHT ON EDUCATION . . . . . .

Winnipeg Re-organizes Its School System

Following the recommendation of the survey of Winnipeg public schools, carried out in 1948 under the chairmanship of Dr. Wm. C. Reavis that: "A school system has but one fundamental purpose—to provide an instructional program. Personnel, buildings, equipment, and supplies are all agents in the realization of this great purpose. The superintendent as the chief executive of the school system must have the requisite authority to select his co-workers, plan, with their assistance, the educational program, and regulate the material facilities needed in the execution of the program—subject, of course, to the approval of the trustees":

Dr. Herbert McIntosh, formerly Superintendent of Winnipeg Schools, has been named chief executive officer taking under his direction all four departments—education, secretarial and finance, works and buildings, and supplies. The board has decided to engage independent architectural services as required for new building with the city Commissioner of Works and Buildings acting as architectural consultant.

O.A.S.B.O. Mid-season Conference Announced

The president of O.A.S.B.O. has announced that it has been decided to hold the mid-season conference of the Association this year at Niagara Falls on January 25th and 26th, 1952. Members are specially requested to make a note of this date, and not to forget it.

Canadian Education Association to Meet in Ontario in 1952

For the first time since the establishment in Toronto of an office with a full-time staff (September, 1945), the Canadian Education Association will hold its convention in Ontario. The probable place of meeting in 1952 will be Toronto, but a definite announcement will be made after the C.E.A. Executive meeting in the latter part of the year. The place of meeting of the C. E. A. is set by invitation of a provincial department of education which also decides upon the location within the province. Cities in which recent conventions have been held are as follows: Toronto (1944), Edmonton (1946), Quebec (1947), Winnipeg (1948), Fredericton (1949), Victoria (1950), Saskatoon (1951). No convention was held in 1945.

Correction

The editor wishes to draw the special attention of readers to an unfortunate error occurring in the October-November issue in connection with the article describing Ottawa's new Fisher Park High School.

Fisher Park High School was a commission shared by the offices of J. Albert Ewart, Ottawa architect, and A. J. Hazelgrove of the firm of Hazelgrove and Lithwick. Credit for the planning of this outstanding secondary school, therefore, should have read: J. Albert Ewart and Hazelgrove and Lithwick, Architects, Ottawa, thus giv-

(Continued from page 40)

Cut maintenance costs! Keep floors clean and lustrous!

CLEAN WITH
JOHNSON'S FLOOR CLEANER

No wonder maintenance men prefer quick acting Johnson's Floor Cleaner! Johnson's Floor Cleaner is recommended for use on hardwood floors, linoleums, and painted floors of all kinds. (Use Johnson's Penetrating Floor Cleaner for use on mastic or rubber tiles). Both Johnson Cleaners are quick, efficient and economical.

POLISH WITH
JOHNSON'S TRAFFIC WAX

The hard brilliant lustre of Johnson's Traffic Wax gives floors incomparable beauty and protection. Traffic Wax is a top-quality buffing wax made especially for wood, linoleum, cork, concrete and terrazzo floors. It buffs to a tough, wear-resistant film that's hard to mar, very easy to clean, and greatly prolongs the life of any floor. Available in either paste or liquid form.

BUFF
WITH A JOHNSON ELECTRIC POLISHER (ALSO FOR SCRUBBING)

A Johnson Heavy-Duty Polisher not only offers far better maintenance . . . it drastically cuts maintenance costs! In *one* hour, a Johnson Polisher can cover hundreds of square feet of floor! Besides polishing it is efficient as a floor scrubber. Their balanced construction gives fast, smooth operation . . . and years of uninterrupted service.

MAIL COUPON TODAY

Mail coupon today for complete information on Johnson's maintenance products . . . also for Johnson's Free booklet on "How to Care for Floors".

1973

S. C. JOHNSON & SON, LTD.

Dept. SPA , Brantford, Ontario.

Please send me all the facts about Johnson's Maintenance Products . . . also the free booklet, "How to Care for Floors".

Name..... Title.....

Company.....

Address.....

City..... Province.....

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EDUCATIONALLY SPEAKING

The Layman and Education

In the October-November issue of School Progress we featured the final report of the Canadian Research Committee on Practical Education—Better Schooling for Canadian youth. We highlighted the recommendation of the committee that our schools should do a better job of teaching the three R's (literature, composition and arithmetic) before going on to anything else in the curriculum. It was important, we felt, that all schools should know that, in the opinion of this body of citizens representing all walks of Canadian life, our schools need to be reminded at this time that these subjects, well taught and well learned, are the basis of all education, practical or otherwise.

But perhaps the most significant fact coming out of the work of the Committee is that these ordinary citizens really have some ideas about education, and are quite capable of playing a useful part in determining educational policy in the schools of the country, if given the opportunity. For these laymen have discovered for us wherein the weakness of modern education lies. Perhaps modern education, like everything else, has become too highly specialized and professional educationists need the leavening influence of the ordinary man to help them serve the public better.

Now, the Canadian Research Council on Practical Education did an all Canadian job, and one of which we have every right to be proud, but there is an old saying that "great minds think alike," and another that runs, "it never rains but it pours," and it looks as though we will have to share the honours of our Canadian committee's discovery with our neighbours to the south who have, entirely separately, found out exactly the same thing.

* * * *

Last year a Governor's Fact-Finding Commission on Education was set up in the state of Connecticut. Under the guidance of this commission, eighty-five separate communities investigated and studied a series of problems concerning their schools. The resulting report, "Do Citizens and Education Mix?" is practical proof that the public definitely has ideas about education and that these ideas cannot be brushed aside as mere layman opinion. Thirty-four of the citizen groups investigated the curriculum and forty-two per cent found need in the curriculum for *more attention to and more thorough grounding in the three R's.* To qoute from the body of the report: "Almost everyone wants the kids to learn more than just the three R's, but they feel that they ought to know them as second nature in order to get the most out of the rest of the curriculum.

Chester O. Newlun, President, State Teacher's College, Wisconsin, writing in the American School Board Journal, describes the weakness of modern education as follows: It is not low salaries of teachers, it is not the teachers themselves, it is not child-centered schools, it is not professional educational courses; it is something else that is the direct cause of certain weaknesses in education today. Even though they have had much schooling, many children, and adults are startlingly ignorant of fundamental facts and skills in English, arithmetic, history, government, etc., not because these fundamentals are omitted from the curriculum of the schools (they are there!) but because, *though these facts are taught, they are not learned.*

A real threat to American education lies in failure successfully to teach fundamental learnings to a large segment of children and youth of normal intelligence. In our schools we fail to discriminate sufficiently between what is of universal necessity and what is incidental. We hardly ask ourselves what is the effect on children whose schooling leads them to believe that it makes little difference what one learns, whether one learns, or how one learns, and that partial and confused learning is sufficient to "get by".

* * * *

Under the heading "Counter Revolution in Schools" the July 9th issue of Newsweek tells the story of the organization and development of the Buckley Schools of Los Angeles under the leadership of Mrs. Isabelle Buckley as illustrating the present day trend back to more thorough teaching of the essentials of education. In the 1930's Mrs. Buckley decided that she had had enough of the modern progressive type of education, and that it was time schools got back to essentials again. Almost at once her school, in which there was strict discipline, began to take on, and developed rapidly. Her school was based on the orderly old fashioned methods with a no-nonsense approach to education. Soon she was forced to open a second school and by 1946 a third, and her rates run as high as $400. a year up to first grade and $600. a year thereafter. Mrs. Buckley has earned a reputation in California as one of the top school teachers on the west coast, and the best families of the state vie with one another to obtain places in her schools for their sons and daughters.

Here is how the Buckley schools work: Starting with the two year olds Mrs. Buckley gets down to business right away. All her pupils are first grounded in good manners. Pupils are not just given paints and brushes and allowed to do what they please. They are taught

the meaning of colour and design and to draw with skill and *to finish what they start.* They start each day with a prayer and listen to stories read from the Bible. Later on they study the Scriptures, and attend Bible classes right up to graduation for, as Mrs. Buckley says, we have to teach *respect for the laws of God and a habitual vision of greatness.* By the time her pupils have finished kindergarten Mrs. Buckley expects them to know how to concentrate and to be accustomed to work. By the end of first grade she expects them to read with ease, and to have begun spelling, writing and arithmetic. Her teachers are not afraid of drilling their charges, or having them memorize reams of poetry or to make them listen quietly to a symphony or concerto. She says children like to learn, and they *like to learn thoroughly.* It is a shame to deprive them of the pleasure.

Science and the Humanities

Dr. H. B. VanWyck, Professor Emeritus, Faculty of Medicine, University of Toronto, speaking recently on the controversy of "The Sciences versus the Humanities" in higher education, presented a common sense attitude towards the problem which, we suggest, provides the key to its solution. He declared that the ideal university is a place where students should receive a total view of life and not where either the humanities or the sciences dominate to the exclusion of the other—that the gap which has developed through excessive specialization is not actually between the sciences and the humanities, but between the great store of human knowledge and its practical application. He stated that, though in late years the sciences seem to have come to outweigh the humanities, still technical training for the professions has played a beneficial role in the universities, if only by keeping closer contact with the outside world. The great problem of the universities today, he claimed, is one of re-establishing a proper balance between the sciences and the humanities. Without the professional schools, the humanities might find themselves lodged pointlessly in the clouds. Without the humanities, the sciences might well develop the whole way into mere money making vocations.

Turning to his own profession to illustrate his points, Dr. VanWyck put his thoughts this way: If you put a high standard on the practice of medicine, you must go beyond the practical training to ethics and a religious base. Without this basis, our civilization could never have developed as it has. The real goal of education is to dignify all tasks and that is the prime function of the humanities.

A Statement of Faith in Education

In a recent issue of School and Society, the National Council of Independent (Private) Schools of the United States issued an important statement on independent secondary education. After a review of the general function of private schools, the statement concludes with the following significant declaration of faith which we suggest contains the kernel of all sound educational philosophy in the present day democratic world:

We believe that the crisis of our time is a spiritual crisis.

We believe in God, and in the universal brotherhood of man. We hold that such belief should be taught, and that pupils should be made familiar with the history and bases of religion.

We believe that the inalienable rights of the individual derive from God. We believe accordingly that the individual has inescapable duties which flow from these rights, and we hold it an obligation on the school to teach both these rights and these duties.

We believe that education resting on freedom of inquiry and freedom of faith is a basic guarantee of cultural continuity and of liberty itself. We hold it the duty of our schools to teach how to meet and manage difficult intellectual tasks.

We believe that all good teaching is rooted and grounded in character carefully cultivated and based on religion and ethics. From such teaching, learning will grow into a life-long strength on which a person may draw in all the private, economic, political, and spiritual stresses, strains, and joys which he will encounter.

We believe that the progress of mankind has been in direct proportion to the freedom of education, the trust in free inquiry, and the virtue of the individual. The first sure warning of tyranny, whether by an individual or by a majority, is the attempt to seize control of education; the certain consequences of established tyranny is the fall of the universities, colleges, and schools, which it invariably recognizes as its most dangerous enemies.

Schools for Our Times

The theme of the annual report of the Profession to the Public by the executive secretary of the National Education Association is "Schools for Our Times." The following are the main requirements of such schools: they must be adjusted to the needs of our times; must be taught by professionally prepared teachers; must be staffed by teachers who are adequately paid; must be housed in adequate buildings; must be supported by a defensible financial program; must contribute to health and safety; must contribute to sound character and ethical conduct; must prepare youth for making a living; must lay the basis for loyalty and good citizenship; must contribute to appreciation and creativeness in the cultural values; must discover and develop talent.

In his foreword to the public, the executive secretary, Willard E. Givens, urges the American public to appraise the schools continually in the light of objectives which have arisen in response to the needs of individuals and communities and calls for co-operation between the lay public and educational leaders. He concludes with the following statement:

The need for constant clarification of educational goals and the continuing adjustment of the educational program is recognized by educators. *If we are to maintain our American way of life, it is imperative that the public join with members of the educational profession to answer the questions: What shall we teach in our schools?* What kind of persons shall teach in our schools? How much shall we pay for education? It is hoped that this report will focus the attention of the American people upon some facts that must be considered in answering these questions.

An aerial view of Regina's Lakeview School 20 sheet Jam Can Curling Rink. Teacher and student teams competing at recess. Inserts: R. B. Chisholm, vice-principal, and Maxine Laidlaw, ass't. principal.

JAM CAN CURLING

At Lakeview Public School, Regina, Saskatchewan

MAY NEAL, EDITOR, THE SASKATCHEWAN SCHOOL TRUSTEE

JAM CAN CURLING, at Lakeview Public School, Regina, has achieved the distinction of being filmed by one of Canada's foremost producers of Motion Pictures—Associated Screen News Limited of Montreal. Originally scheduled to "shoot" the action in half a day, they found the whole set-up of Lakeview School Jam Can Curling warranted a day and a half of steady shooting.

Twenty Sheets of Ice

While the activity is not entirely new, nor was last season its first in Lakeview School, they do have "The biggest Little Curling Rink in the World"—twenty sheets of ice 45 x 8 feet each. The "rocks" are standard jam cans procured by an organized student canvas of the district, generally on a cold and frosty Saturday morning. Brooms are not so easily acquired, but a local rule meets the problem; "If you have only one broom, share it." From making and maintaining the rinks, making the "rocks" scheduling the draws and on to the culminating Bonspiels, the whole project is a student activity. Even the trophies, for annual competition, are the ingenious concept of students. One, made by a Grade V pupil, consists of two dishmops crossed over a small jam can and mounted on a box. Four automobiles, of the 8-inch wheelbase variety, are also competed for. Winning one of these trophies has as much student importance as winning in the MacDonald-Briar Competition.

Thus the popular winter sport of Curling is enojyed by Lakeview School pupils. Teachers and members of the Home and School Club participate with the students in two February Bonspields. Apart from a 5-cent Bonspiel entry fee to defray cost of small prizes, the whole project is operated at no cost whatever.

In Regina Schools, sports activities come under the direct supervision of the Vice-Principals: In Lakeview, R. B. Chisholm stresses the co-operation of Principal Harold M. Covell and all the staff members. They fully recognize the health value of this co-operative outdoor sport. But the real worth of the project is not in the "play" angle, but in the co-operation and enthusiasm of the pupils and the community; the sense of responsibility it teaches, and the opportunity for leadership it affords.

Bonspiels

The season's Jam Can Curling starts just after the Christmas holidays and culminates in two February bonspiels. In one, the teachers participate and usually get beaten. They have to take quite a ribbing from the pupils. But Mr. Chisholm stresses "The comradeship resulting between teachers and pupils while at play, repays the teachers for being beaten."

The other bonspiel is with Lakeview's very-active Home and School Club. No project could better accomplish the objective of unity between home and school than does this Jam

Can Curling. Rivalry is keen but it is the happy association of parents, teachers and pupils engaging in this healthy, invigorating outdoor activity, that really counts.

How to Prepare Jam Can Curling

Mr. Covell has, from his experience with Jam Can Curling in Wetmore School and now in Lakeview, prepared an information sheet and for the guidance of others, kindly permits us to reprint it thus:

Materials Needed: Lots of jam cans, sand or gravel, cement, wheelbarrow or trough, and shovels for mixing cement, baseball bat, cold climate and a supply of water, an old washtub.

Preparation of Rinks

At Lakeview, we have twenty rinks, each measuring about 45 feet long and 8 feet wide. Your project could be one or more sheets of ice which should not be any smaller than 30′ x 6′ per sheet.

Step 1—Determine the size and number of sheets of ice you want, and making allowance for the banks between the sheets, flood the whole area at once just as you would for a skating rink.

Step 2—Measure off the individual sheets of ice and prepare a mixture of snow and water in the old washtub. This slush mixture is packed in between boards 1″ x 8″ x 10′ nailed to make a form. This mixture immediately freezes and the boards are moved along until the whole division between the rinks is made.

Step 3—Decide upon the number and size of each ring at the ends of the rink, and mark in the rings, using an improvised compass, making three circles, the centre two feet in diameter, the second four feet in diameter, and the third six feet in diameter.

Step 4—Mark the hog lines two feet from outer circle in with a straight stick and a sharp spike.

Step 5—Fill in the marks with blue dye or color the circles and then immediately flood again carefully to give a protective coating of ice over the circles. Needless to say the rinks require constant attention but we flood them only once a week, once they have been prepared.

Preparation of Rocks

Step 1—Place the jam can in the corner of the room and pound on the bottom with a baseball bat so as to round out the bottom. Be careful not to pound too much—just enough so that there is a little of the centre of the can projecting below the bottom rim.

Step 2—Mix the mortar (we use 4 to 1) and fill cans to within ½″ (one half inch) of the top. Paint and/or decorate the cans to taste.

Rules for Jam Can Curling

Follow the general rules as for curling, but we found the following local ground rules necessary.

1. Don't slide past the hog-line of the end from which you are throwing.
2. A rock is dead if it isn't completely over the far hog-line.
3. If you have only one broom to a rink, share it.
4. You must hold the rock until you shoot. Don't leave the rock behind the hog-line and slide up to it.
5. You can sweep a rock from between the hog-lines right into or past the house.
6. When beginning to shoot, put your foot on the hack.
7. Only Skips may stay in the house.
8. Skips are responsible for having the rinks cleaned.

ALLOWED TO ATTEND COURSES IN SCHOOL OF OWN CHOICE

Important Judgement, Welland County, Ontario, 1951

THE right of a secondary school student to choose a course of study not available in his own High School district and to enrol in it in another secondary school where the course he desires is open to him, was confirmed in a judgment laid down by Judge H. E. Fuller on Friday, October 12th, 1951, in the County Court of the County of Welland, Ontario.

The action arose over the refusal of the Ridgeway-Crystal Beach High School Board to pay the Welland Board for the education of a student from Ridgeway who enrolled in the grade IX year of the Industrial Arts course in the Welland High and Vocational School. In making his award, Judge Fuller rendered a decision which affects all the secondary schools of the Province. It is of particular interest to parents of all children approaching secondary school entrance.

Many district school boards have virtually denied their resident pupils the right to go outside their own district for a type of education not available at home. This right was laid down some years ago by the Ontario Department of Education in section 55 of the High Schools Act, (formerly sections 47 and 48), the pertinent portion of which reads as follows:

> "A resident pupil in a high school district shall have the right to attend any high or continuation school . . . to take a course of study leading to a type of secondary school graduation diploma not available in his own school district."

The matter has assumed increased importance lately owing to the formation of many new high school districts and to changes in school grants.

It is important to note that the judgment confirms the right of the student to enrol at any grade level where the school is open to accept him. If the course of study begins in grade IX, the right to enter at that level cannot be questioned.

Parents should be aware that they can legally send their children to a secondary school outside their own district under these circumstances and that their own district board cannot refuse to allow them to do so.

School boards also should be aware that they may open their schools to, and accept students from outside school districts, and obtain payment from the outside boards.

THE SCHOOL THEATRE COMES OF AGE!

In the New Victoria Composite High School, Edmonton, Alberta

In the August-September, 1951 issue, School Progress was pleased to be able to publish a very complete illustrated description of Edmonton's new Victoria Composite High School. In this article, the exceptionally fine school and community theatre (auditorium and stage facilities) was described as follows:

THE recreation wing of Victoria Composite High School, Edmonton, has its own main entrance onto the Kingsway, with a floodlit concrete surfaced parking lot adjacent. This wing houses the 758-seat auditorium.

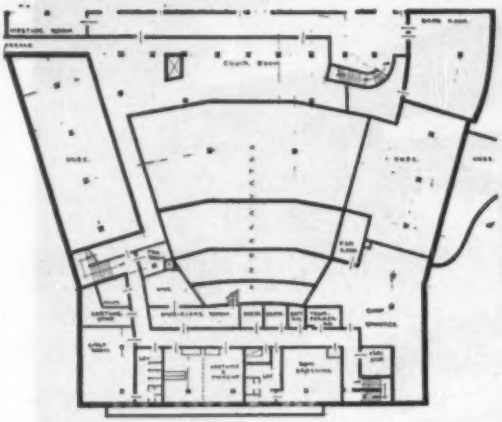
The foyer has been treated unusually, to set it apart as one of Edmonton's smartest. Interior brick walls, a winding terrazzo staircase with terrazzo flower box at its foot, wall wash lights, are topped by an amorphous shaped fluorescent fixture in the centre of the ceiling, surrounded by a large amorphous shape of acoustic tile. A final touch is the fixture's rose hue spread over the ceiling, effectively setting off the wall washes.

Everything for complete student education in stage craft and drama presentations has been provided in the auditorium and its adjuncts. From the sloping floor and the latest in theatre chairs, to the spacious stage and the most modern lighting and stage equipment, nothing has been spared.

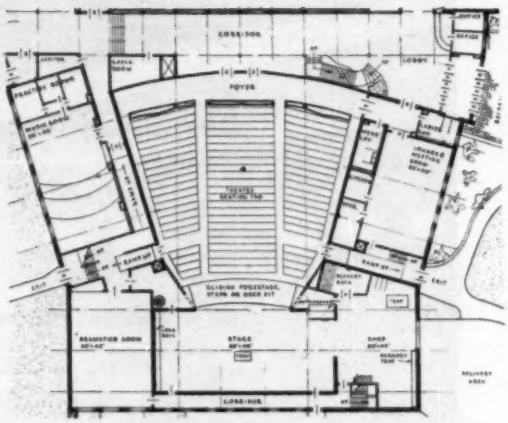
Side walls of the auditorium slope in toward the stage so that an intimate atmosphere is maintained and there is little division between audience and performers.

Planning of the auditorium was the result of extensive research in seating arrangements, lighting, acoustics, scene shifting, and multi-purpose stage presentation.

To achieve good sight lines, aisle slopes were permitted to go to a maximum of one foot in five, which is in line with recommendations in new, modern building codes.



Basement Floor Plan of Theatre showing dressing rooms, etc., below stage.



Ground Floor Plan of Auditorium and Stage with ancillary accommodation.

Acoustic qualities were carefully analyzed with the resulting reverberation times (at 512 cycles):

empty	**1.55 seconds**
250 persons	**1.28 seconds**
500 persons	**1.1 seconds**
758 persons	**1.0 seconds**

Special lighting was installed, including wall washes, ceiling washes, cove lighting, wide beam down lights, and narrow beam down lights for aisle lighting.

All these, with the exception of the cove lights, are controlled by dimmer switches, in order that fading and mixing of lighting can be used to create the proper mood in the house.

Built in with the cove lights are two ceiling light bridges for front and forestage lighting. Six 2,000 watt Lakolites are installed in one bridge, with provision for six more in the other bridge. These are also on the dimmer circuits. Both stage lighting and auditorium lighting are controlled by a lighting mixer with 27 autostat dimmers and three masters. Total connected load is 130 K.W. Stage lighting includes borders, spots, cyclorama floods, and floor pockets.

The stage itself is large enough for any production. Its proscenium opening is 36′ wide, 18′ high, and the stage proper is 30′ in depth and 65′ in width, not counting the large work area opening off the stage on the same level. The fly loft, which extends 45′ above the stage floor, was decided upon after careful consideration of the relative merits of horizontal and fly loft methods of handling scenery and drapes. Its roof is gridded with 4″ channels to support necessary pulleys, etc., for any kind of stage equipment which may later be desired.

The back wall of the stage is finished in smooth plaster painted light blue to serve as a cyclorama.

Opening off the stage is a complete workshop area with scene docks, paint frames, cupboards, sink and storage areas, and stage manager's office. Below stage are dressing rooms, costume and makeup rooms, property storage rooms, musicians' rooms, electrical and general storage rooms.

A separate stage paging system is installed, which permits paging and cue directions from stage director's lookout to all dressing rooms, musicians' rooms, pin rail master, sound control room, and projection room.

All stage curtains are fireproof with Flamort, and a counterbalanced asbestos fire curtain automatically drops down its steel smoke pocket track at the stage front if fusible links holding it up are melted by a stage fire, effectively sealing stage from auditorium.

The orchestra pit has been designed so that different effects can be arranged: 1. a full stage floor, covering the orchestra pit; 2. open pit; 3. or a set of steps across the orchestra pit; 4. or any combination over any part of the pit. This is achieved by means of sections of fore-stage which roll along channels and which are moved up to stage level and thence out of the way by means of an hydraulic piano hoist at the stage front, operating between orchestra pit and stage levels.

The piano hoist was planned as insurance against the crushed legs which many high school students suffer when moving heavy pianos, but has also been pressed into service to achieve the desired flexibility in stage surface.

The back of the auditorium and portions of the sides are covered with acoustic tile, while the remaining walls are brick. Roof is metal lath and concrete.

Anemostats in the ceiling serve as both inlets and exhausts for ventilation.

A fireproof projection room is also provided in the auditorium, with an adjoining observation room.

A notable feature of the auditorium is the large lounge area opening off the foyer, which can be used as a meeting room or classroom but which for performance serves as lounge area for auditorium patrons. It is equipped with a small kitchenette so that tea can be served during intermissions, if so desired. This is in line with practice in many repertory theatres.

Adequate checking room is also provided.

Adjoining the stage, and accessible from it, is the dramatics room, or green room, for classroom teaching of theatre arts. It will also serve as chorus rehearsal room or assembly room for performances.

Close to the auditorium is a tiered music room, completely soundproofed, with individual practice rooms adjoining.

CHARLES RITTENHOUSE, DIRECTOR OF DRAMA, PROTESTANT SCHOOLS OF GREATER MONTREAL

Shortly after publication of the issue of the magazine carrying this descriptive feature, the editor was delighted to receive an enthusiastic letter from Mr. Charles Rittenhouse, Supervisor of English and Drama for the Protestant Schools of Greater Montreal, an authority on drama and the stage, praising the Victoria theatre as undoubtedly the most outstanding school theatre yet built in Canada, if not on the whole continent. He suggested that what the educational officials and architect of the Edmonton school board had done was so important a contribution to the development of the school theatre in Canada that it should not be allowed to pass without further comment, and offered the following appreciation of their achievement for publication:

SUPERINTENDENT Sheppard and Architect Dewar have been surprisingly modest in their joint article, Victoria Composite High School (School Progress, Aug.-Sept., 1951), at any rate about one section of that school. Eliminating that one section, and possibly the pool, I imagine one could find several high schools on this continent which would measure up to or surpass the overall design in imagination, scope, and efficiency; but surely nowhere in the world does there exist, other than on paper, a school design to equal that masterpiece, The Victoria Composite High School Theatre in Edmonton, Alberta. In the feeling that very few educational officers and architects may realize exactly what Mr. Dewar and his associates have done, I am writing this appreciation.

Some years ago I submitted to School Progress a short and, I hoped, a harrowing article on school theatres and included a sketch for a "practical plan" for Canadian schools as well as an "ideal plan" for some High School —Community Center in Heaven, (The Modern School Stage Should be a Fully Functional Acting Area, June, 1945, page 39). It would now appear that Edmontonians do not consider Heaven any too good for their children, or else my dreams were truly earthbound. In any case one's approach should be towards that which is unique and has striven to be ideal. Since some features of this theatre were not mentioned or were passed-over with unconventional calm in the original articles, I choose to emphasize these here:

1. The Victoria School Theatre, while attractively linked to, is unfettered by any other part of the plant, except in its lobby-lounge arrangements. Therefore, one can almost say that this theatre was permitted to make its own plans, subject only to the uses to which it would be put. To understand just what this means one need only compare the auditorium of the fine new Mount Royal High School shown on page 39 of the same issue. Here is a very good school theatre of which the community is extremely proud, but it is hampered, indeed prevented from taking its proper form *on all four sides* by the rest of the building and its placement on the street. The result is an admirable compromise, but not truly a first class theatre.

2. The lobby and lounges are ideally spacious. In fact it looks as though the available area is greater than that for the auditorium proper, which is as it should be and almost never is, in or outside of schools. Moreover, every convenience that an audience needs for intermissions, before or after-theatre activities has been provided including, I hope, ventilation. A particularly good touch was the placing of the school cafeteria off the lobby.

However, the blocking west wall of the corridor, backed by the corrective gym and gym storage rooms, forced certain compromises. Ideally the lounges, check-room and toilets should occupy this space, if the theatre traffic experts are to be believed. Another compromise is the dual-purpose lounge-meeting hall which should have been *only* a small lecture or recital hall with permanent seats and soundproofing so that it could be used at the same time as the theatre with no inconvenience to either audience, particularly in the matter of toilets.

In short, the Victoria School Theatre could have had ideal front-of-house conditions plus an extra and most useful small hall had the design been as free to develop on its fourth side as it was on the other three. Still, the mere presence of spacious lounge room plus a cafeteria must be considered unique in a school theatre.

3. The auditorium seats only 758! This is a remarkable and, I think, an admirable example of restraint for a school population of some 1,700. Once again theatre planning rather than (typical) school-building planning is in striking evidence. 750 is just about the perfect audience for a school play, opera, concert, film or normal assembly. For large assemblies, rallies, etc., it is far better to requisition the gym than to sacrifice the theatre. For such large scale community ventures as symphony concerts, charity shows, star recitalists, expensive touring attractions, another type of building altogether is required, the Civic Auditorium. Schools should not be expected to erect or effect a compromise with such an auditorium.

About the seating plan of the Victoria School Theatre one has some reservations. The back six rows strike us as a bit remote. Why could not 150 of the seats have been placed in a balcony? What objections did the planners have to a balcony? It brings the audience closer, always a desideratum. Also I presume that city regulations forbid the use of a continental seating plan; otherwise it should have been followed. Nevertheless the seating plan is very good. Every member of the audience will have a good view of the stage, owing to the marked slope of the floor, one foot in five, and to the fanshaped hall. Placing the back six rows in a balcony would have made the design more compact and intimate.

4. On paper the acoustical qualities strike one as excellent. One wonders if an acoustician, disinterested in selling acoustic tile, was consulted during the planning

stages. The visible evidence supports the idea. If so, the Victoria School Theatre was again fortunate. More than one ambitious new school theatre has been spoiled by the monstrous provision of an acoustic tile ceiling.

One feature that should improve acoustics greatly is the absence of windows or doors opening onto streets or yards. Ideal, and well-nigh unique in school theatres!

5. One cannot imagine a better stage for school and community purposes than this one. Bigger, but no better. Again the word is ideal, and, perhaps, unique. These are the evidences of careful, imaginative planning and a far-sighted and benevolent school board:

(a) The total back-stage area with all accessory rooms is, perhaps, *twice the area of the hall proper*. That this is just as it should be does not reduce one's amazement that such conditions exist in a school.

(b) There is adequate provision for *both* the flying of scenery and the use of wagon stages through the inclusion of a 45′ fly loft with grid and fly gallery and a large scene shop adjoining the 65′ width of the stage proper. The playing depth from front curtain line to the rear wall (rightly treated as a cyclorama) is probably 28′. These dimensions are ample without being extreme. It would be difficult, perhaps impossible, for a Broadway touring company of, say, "Oklahoma" to play on such a moderate sized stage, but then it should not be the business of a school theatre to provide the facilities for an elaborate American musical.

One dimension only strikes us as over-ambitious—the 36′ proscenium opening. That this space can be closed in by the use of tormentor wings is a consideration, of course, but still by so doing one would reduce the efficiency of the present excellent sight lines. A company wanting to present an intimate interior scene is going to find itself in difficulties. At the same time 36′ is excellent for ballet, operetta, and Greek and Elizabethan revivals. But then so is a 32′ which likewise can be more easily reduced for realistic drama without spoiling sight lines.

(c) The use of a piano hoist to achieve a delightfully flexible apron stage was a truly imaginative touch that should warm the school directors' heart, particularly a director interested in formal presentations. Equally useful and unexpected are the two fore-stage entrances. Indeed the whole treatment of the fore-stage area is quite remarkable, and provides another reason why a 36′ proscenium seems unnecessary.

6. The total connected load for auditorium and stage lighting is 130 KW! One's opinion of that feature can be expressed only in exclamation marks, when it is remembered that we are dealing with a school theatre. This must certainly be unique (I know it is for Canada) and, I would say, it goes beyond the ideal requirements. More about this later.

7. Every accessory for the conduct of a course in Drama and for the efficient operation of back stage crews has been thought of, including a paint frame. The below stage arrangements are perfect. Surely there has never been a school board so considerate of the needs of the stage worker. Other school architects might note such features as the placement of the switchboard (the operators can stand on the *forestage*, invisible to the audience and yet with a view of the whole stage!); the scenery storage dock and racks well out of the traffic lines but perfectly accessible; the three traps, including the long one in the scene shop for hoisting the paint frame; the ample storage rooms; the well-designed dressing accommodation; and the Dramatic and Music Rooms with direct access to the stage. Very, very wonderful! Indeed, it seems to me that the only missing accessory is a trough for cyc lighting, and that is not *really* necessary, though inexpensive.

All the above features, 1-7, should make the Victoria School Theatre a showplace, a mecca for Drama educationists and I hope school architects. There are some excellent *university* theatres to the south of us, comparable in scale, but often less efficient in design. And here and there around the world there is a small *municipal* or *state* theatre built with equal or greater care and imagination—but to find such a plant as this in a *Canadian school!!* A few American schools have bigger plants and more elaborate designs. Recently I saw plans for one such colossus, in, need I say, California. All I could think of was the dry-throated boy actor playing his first role in a one-act play, the time that it would take to instruct non-professionals in the intricacies of the none-too-safe equipment, and the mount of sheer scenery that would have to be constructed for even a simple 3-act play. No—Edmonton and not California has provided the model for a high school plus residential-community theatre.

And that brings us again the matter of stage lighting, for it is here, I feel, that the planners of the Victoria School Theatre have gone overboard. It is important for the future of other school theatres that this model not be considered extravagant to copy. Therefore, I would like to state that it is quite unnecessary to provide 130 KW to light an auditorium and stage of these dimensions, bearing in mind the uses to which they will be put. For example, take those 2000 W Lekolites on the two front-of-house bridges in the auditorium ceiling. The bridges are certainly necessary, but not the watts. 750 W Lekolites were all that were necessary to light from the front-of-house the elaborate Kiss Me Kate and Member of the Wedding Broadway productions that played Montreal last year, and the throw was about the same. Again, the most elaborate lighting plot I have ever used for a school play was for a production of Hamlet. The total stage load was 35 KW, and to quote the Drama Editor of the Montreal Star, "The Lighting alone was worth the price of admission." I freely admit that this lighting was far from ideal, but I also sincerely feel that with an additional 20 KW I could have achieved effects that would have pleased even an Edmontonian. Further, as a school and community director, I wouldn't care to spend the time juggling with much more lighting than that. Nor would I care to face a Maintenance Department with the annual bill for replacements. In short 130 KW is too complicated and expensive for a school-community theatre to be operated by part-time amateur crews. About 70 KW is, perhaps, ideal, which is all that is being provided for the new Monkland High School Theatre in Montreal, which, incidentally, will have a panel with only 15 dimmers on a plug-in system.

Again profound congratulations to the Victoria Composite High School.

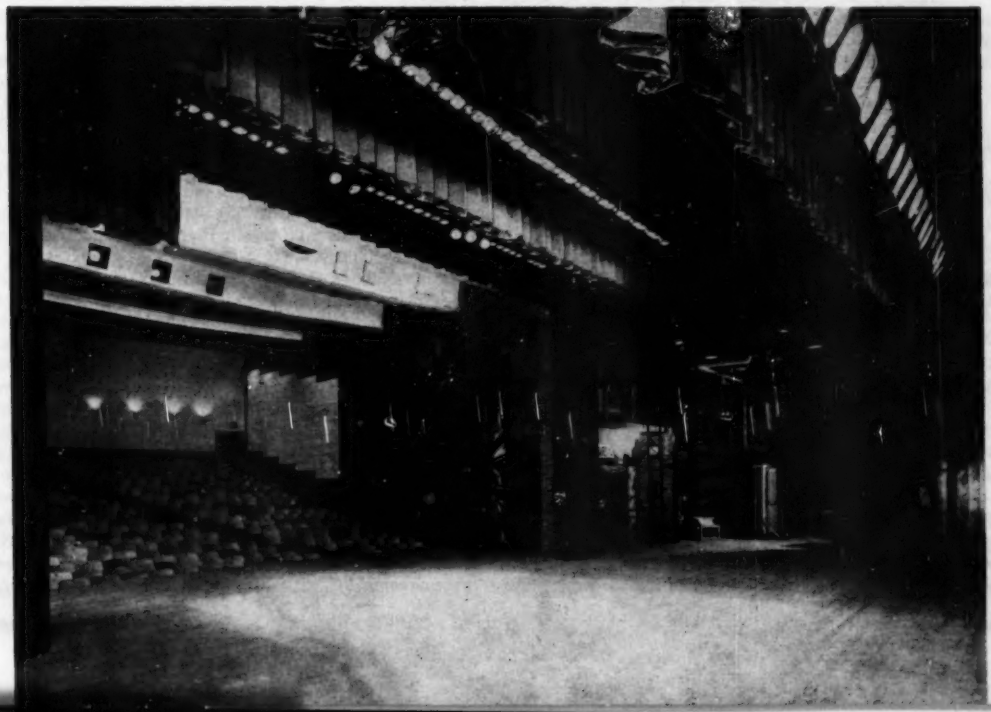
M. C. DEWAR — DEWAR, STEVENSON & STANLEY — EDMONTON, ARCHITECT OF VICTORIA SCHOOL

When Mr. Rittenhouse forwarded School Progress his appreciation of Edmonton's wonderful school theatre, he made the very practical suggestion that it would be very much worthwhile if fuller details of the stage facilities could be obtained for publication perhaps in conjunction with his appreciation. Accordingly, the editor wrote Mr. Shepherd, Superintendent of Schools and Mr. Dewar, the architect, and asked if they would supply this information for publication along with further illustrations. Their response was immediate and most generous as is shown by the illustrations accompanying this article, and the detailed description of stage facilities provided by Mr. Dewar the architect, as follows:

I AM very happy to know that the stage facilities in the new school auditorium has excited interest in the East. I believe the facilities to be quite outstanding, not only for school auditoriums but for theatres generally. As you will appreciate, planning of a theatre includes not only careful consideration to the actual stage area but also to the design of the auditorium proper, the lighting facilities, and the stage rigging, to make certain that all aspects of the planning are properly co-ordinated so that the maximum in versatility can be achieved. Good lighting effects, flexibility of stage scenery, good acoustics and sight lines are required for the creation of the proper moods for the audience.

With particular reference to the stage rigging and curtains, I would mention that the rigging equipment was supplied by J. R. Clancy Incorporated of Syracuse, N.Y., suppliers of theatre equipment for many years and with a very high reputation for the quality of their material. The rigging supplied by this company included loft blocks, head blocks, floor blocks, pin rail, curtain tracks, curtain track motors, cable saddles, tee bar counter weight systems and pipe battens. Some of the aforementioned items such as the tee bars and pipe battens were manufactured locally to Clancy's specifications in order to avoid the expense of freight hauls, duty, et cetera.

Curtains and border lights, etc., are suspended from metal pipe battens, generally 1¼" pipe, in some cases 2" in diameter. These pipe battens are supported by five lines of steel cables from the fly gallery and in turn collected and counter-balanced on a tee bar counterweight system. This tee bar installation was selected for its safety features and ease of handling. A counterweight gallery was installed approximately thirty-five feet above the pin rail in order that the counterweight carriages could be loaded at this level, eliminating the necessity of hauling up heavy curtains before counterweights could be installed. Curtains were assembled on the pipe battens at stage level and the counterweights installed from the gallery until the proper balance was achieved. The usual quick setting locking devices for the handropes for flying the scenery were installed at the pin rail



level. The asbestos curtain is counter-balanced separately at the proscenium wall with necessary fusible links for automatic operation. Electrical cables supplying border lights were suspended from the fly loft with sufficient slack to allow the border light to be lowered to stage level without the necessity of dismantling or disconnecting the cables. The cables were secured by saddles to the extreme lifting cable of the pipe batten.

The stage drapes were supplied by C. Woodward Ltd. of Vancouver and the total yardage amounted to some sixteen hundred square yards. All of the drapes were flameproofed with Flamort.

Provision has been made in the rigging for additional lines for either drapes, scenery or border lights. The equipment at present comprises the following, starting from the proscenium opening:—

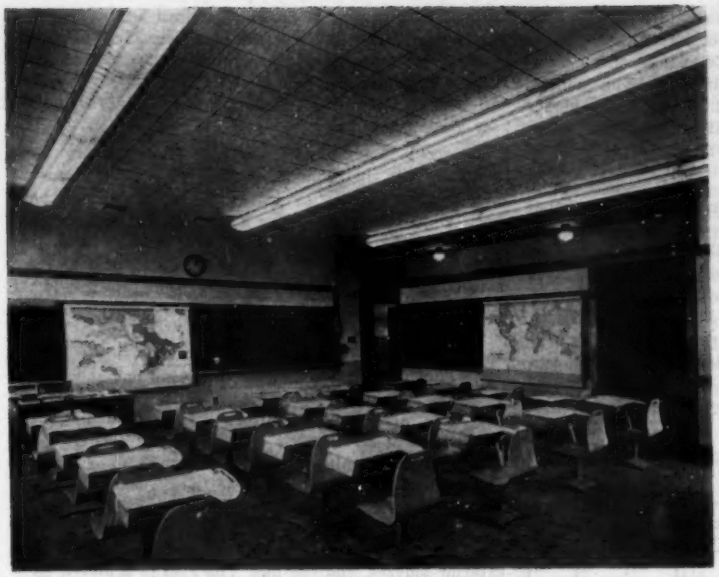
1. The asbestos curtain.
2. The valance red velour.
3. Main curtain, red velour motor operated.
4. Light Border No. 1 comprising nine 150 watt lamps in each of three strips (total 27). In alternate red, green, blue—nine lamps of each color, also ten baby spots 500 watt Lekolites.
5. Grand Drape, hammered blue satin.
6. Tormentors, hammered blue satin.
7. Main act curtains electrically operated—hammered blue satin.
8. Motion picture screen with hand-operated black draw curtains.
9. Border—hammered blue satin.
10. Side lags in hammered blue satin.
11. Light border No. 2 comprising 44-150 watt lamps alternate colors, green, amber, red, with the work light in the centre.
12. Border—hammered blue satin.
13. Side lags—hammered blue satin.
14. Cut-off curtain—full size hand operated, hammered blue satin.
15. Border—hammered blue satin.
16. Side lags—hammered blue satin.
17. Cyclorama lights comprising twenty-four 500 watt spots, three color circuits, complete with Gelatin frames.
18. Spare pipe batten for cyclorama curtain.

The back wall of the stage is plastered smooth and painted a light blue and this back wall acts as a cyclorama wall or curtain. In addition, there are four floor pockets on each side of the stage, three of which are located on stage and one in the permanent portion of the fore stage; also there are two wall pockets each side of stage and on the inside of the proscenium wall for tormentar lighting. In addition there is supplied portable equipment comprising two one thousand watt spots with telescopic stands and two 500 watt floods on telescopic stands.

In the auditorium there is provided two light bridges at the ceiling to give fore-stage lighting. Bridge No. 1 which is nearest the stage has been equipped with six 2,000 watt Lekolites. Bridge No. 2 is wired complete for an additional six 2,000 watt Lekolites to be installed at some future date.

In addition to the foregoing there is provided a very complete dressing room set-up below stage comprising two single person dressing rooms and two large dressing rooms for groups. There is also provided a costume room and a make-up room complete with the necessary wardrobes and dressing tables, showers, et cetera. There is also provided a trap room, a large storage area for props accessible through hatchways from the stage level and storage room for stage wardrobe equipment. There is a musicians' room and electrical room. The costume and make-up room are separated with a "Modernfold" door and can be thrown into one room for teaching purposes. In addition to the above there is provided on the stage level a large workshop complete with work areas for both carpentry and painting, scene docks and other storage areas. A fully equipped stage switchboard is provided complete with 27 color dimmer circuits and three masters as well as auxiliary switching for other lighting systems.

Located above the switchboard is a stage manager's observation room from which he can supervise the complete stage area as well as observe the forestage and the auditorium through an observation window. In this room there is provided P.A. equipment by means of which he can call the dressing rooms, the pin rail location, projection room and observation room at the rear of the auditorium. A complete cross-talking system is thus provided for co-ordinating both cueing and lighting directions. Also included in this observation area is a sound transcription unit for the production of various sound effects, or musical programs from recordings and which can be played over the loud speaker system. The auditorium loud speaker is a high fedelity Altec A-4 horn system complete with high and low frequency horns.



Fifteen three-lamp fluorescent luminaires in continuous rows in room 25 feet wide provide 35 foot-candles of illumination.

Building: Chesley Public School, Chesley, Ontario.

Architects: Craig & Madill, Toronto.

Lighting Equipment: Henderson Electric, Toronto.

PROVIDING EFFICIENT SCHOOL LIGHTING

Is a Special Engineering Problem in Every Modern School

***FRANK REED, LIGHTING SERVICE DEPARTMENT, ONTARIO HYDRO COMMISSON**

THE science and practice of the illumination of school classrooms has been a subject for much study by school officials, their architects, and particularly their lighting engineers. The bibliography of articles and books produced within the last fifteen years is quite formidable. Extensive practical tests have been made, some independent authorities, some sponsored by commercial interests. All these have contributed substantially to the body of scientific knowledge. We now look for simple conclusions, usable data, and reasonable specifications that will ensure adequate results in the form of visual benefits in the classroom.

So far the results don't look too simple, and those who are hoping for rule-of-thumb procedures may be disappointed. We can only say that there has emerged a limited variety of practical lighting methods, both natural and artificial, and that these are each hedged with their own special restrictions depending upon the many variables that surround them. It is encouraging to know that virtually all of the researchers find themselves to be in comparative harmony, at least on fundamentals.

Before launching into a discussion of the techniques of classroom lighting by both natural and artificial means, let us look briefly at the objective—*to produce a comfortable visual environment for relatively severe and prolonged seeing tasks of the classroom.*

Objectives

(a) Quantity

How much light is enough? There is no simple direct answer to this because seeing benefits accrue at much higher levels than may be economically attained. As the illumination level is raised from zero the eye-benefit curve rises very rapidly, then flattens out according to the law of diminishing returns. Up to 30 or 40 foot-candles the improvement under increasing illumination is quite pronounced (see Fig. 1), and it continues at a relatively lower rate well past 100 foot-candles. The recommended level of illumination therefore cannot be an optimum but rather one influenced by the practical consideration of cost. The School Lighting Committee of the Illuminating Engineering Society in 1947 proposed a minimum level of 30 foot-candles for ordinary classrooms (see Table I). This was approved in 1948 by the AIA and the American Standards Association. The Committee, incidentally, was composed of nineteen members: two architects, two consulting engineers, three university department heads, a state education department, two board of education representatives (including one from Toronto), a sight conservation

**This article appeared in the May issue of The Journal of the Royal Architectural Institute of Canada.*

bureau, four utility engineers (including the Ontario Hydro), and four representatives of industries.

The Ontario Department of Education now recommends 20 to 30 foot-candles minimum. The general practice in applying this standard is to use the higher level for new schools and alterations to older urban schools, the lower for alterations to all small rural schools.

(b) Quality

So much for quantity. The matter of quality is another thing, and not as readily specified; yet it is a factor of utmost significance in classroom lighting. Doubtless all readers have heard this discussed under the involved title of "distribution of brightness in the visual field." Simply the aim is to minimize brightness contrasts. Obvious brightness contrasts are recognized as "glare" and easily avoided because recognized. More subtle con-

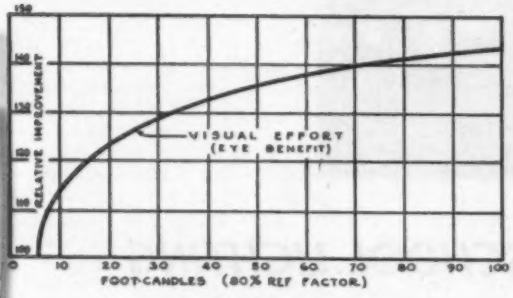


FIGURE 1
The curve summarizes the results of several investigations involving the visual recognition of test objects.

trasts if persistent may also have a deleterious effect, sometimes not limited to the eyes alone but to general health and physical and mental development.

To avoid a technical discourse and yet give some usable data we may summarize the recommendations for brightness control by stating relative brightness

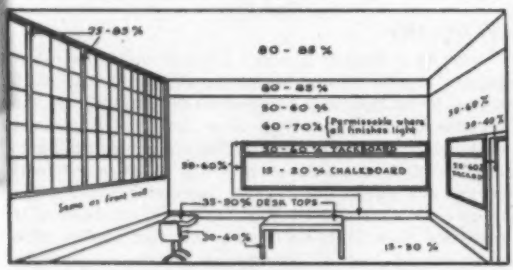


FIGURE 2
Reflection factors desirable for classroom surfaces.

ratios that are considered allowable in classrooms. These are set out in Table II. But what specifications will ensure these results? Obviously these: specifications relating to the brightness of window areas and luminaires, and the reflectances of ceilings, walls, chalkboards, tackboards, desk tops, and floors. Fig. 2 illustrates the recommended surface reflectances which, in combination with proper luminaires, will produce good brightness ratios. The writer believes that classroom colour schemes can be made to meet the specifications shown in Fig 2 without seriously limiting the designer. They allow full liberty in both hue and saturation, and reasonable liberty in value.

Methods

(a) Daylighting

In most classrooms daylight is the primary light source. It is therefore reasonable to seek a means of using it to utmost advantage. Several methods have been employed to introduce a greater quantity of daylight into the classroom. Sometimes these devices have been highly successful, sometimes of doubtful value, and sometimes an expensive disappointment. In the latter instances the fault may not be in the basic methods used, but in the manner and circumstances in which they were employed.

Most of our ideas on this matter, and our subsequent practice, have developed out of new design concepts employed by architects in California and Texas under the inspiration of Dr. Bursch (California State Division of Schoolhouse Planning) and Dr. Harmon (Texas State Department of Health). These new design concepts include a variety of devices to introduce daylight into the classroom: bi-lateral lighting, light-directing glass block, roof monitors, exterior projections, interior and exterior louvres, and the like. The results achieved have been carefully investigated and tabulated. On the whole, though certainly not without exception, they were good *for that latitude and climate.*

Our Canadian architects, or perhaps rather their clients, have sought to emulate these southern examples, sometimes with little regard for the altered geographical circumstances. Some of these southern classrooms have been deposited on Canadian soil with no attempt to critically analyse the conditions that made them satisfactory in their natural habitat.

We are not prepared to set down here proposals for adapting them to our use nor are we able to propose new design concepts that might adequately meet our conditions. The fact of the matter is, no engineer or architect is in a position to point the way in this regard until adequate studies have been carried out to a sufficient extent to indicate procedures likely to be fruitful. Cursory field checks of quantity and quality of daylight illumination in the contemporary style of classroom have been made by the writer. The results are sufficiently good to indicate that these new designs have possibilities, and sufficiently bad to indicate that more factual data is needed for the guidance of designers.

At the request of the Ontario Department of Education, the Research Division of the Ontario Hydro is now undertaking a thorough study of this subject. The Department has indicated that it desires research in the whole field of classroom visual environment, including both daylighting and artificial lighting in classrooms of traditional and contemporary design. The project will require a year or more to complete.

In the case of the traditional style of classroom, enough is already known to indicate suitable specifications for maximum daylighting with good brightness control.

1. Prohibit the introduction of direct sunlight by orientation so that the major window area of the room faces that portion of the sky that has the most uniform light. Therefore the main windows of the classroom

should face north. An eastern exposure may be used as second choice if a louvred awning or roof exterior is incorporated in the building to shade the windows from direct sunlight.

2. Windows should begin at a point three and a half feet from the floor and continue clear to the ceiling, and should extend the entire length of the room. The elimination of the blank section of the window wall at the front of the room is desirable, for its presence puts the front chalkboard in comparative darkness.

Ordinarily when windows occupy so much of the outside wall, classrooms with northern or eastern exposures have no appreciable veiling glare on the blackboard. If smaller window areas or different exposures are used so that veiling glare is present on the front chalkboard, louvering the front window to reflect the light to the ceiling will eliminate glare.

Discomfort occurs whenever intense light can enter the eye at angles below the normal line of sight. Windows three and a half feet from the floor are above the direct line of sight for a child seated, but permit him to see outside when standing.

Tests have proved that the light entering the room from the top of the window is the most effective. The inside row of desks receives 41 per cent of the illumination from the upper *quarter* of the window. Therefore glass should extend as close to the ceiling as possible. If the construction method will permit the elimination of practically all of the header, so much the better.

Mullions should be as narrow as possible. In warmer climates it is feasible to use steel sash and frames, and so reduce mullion space to the minimum. Where that is not feasible, other means should be used to reduce the size of glass interruptions.

3. Proper desk arrangement is a key factor in the classroom visual environment. The recommended pattern for a unilaterally lighted room is obtained by drawing a line diagonally across the room at 50° with the window wall, originating at the front of the first window. All desks in front of this line should be faced straight ahead, with the line of sight parallel to the window wall. All desks behind the line should be faced so that the line of sight makes an angle of 50° with a line drawn from each desk to the front of the first window.

(b) Artificial Lighting

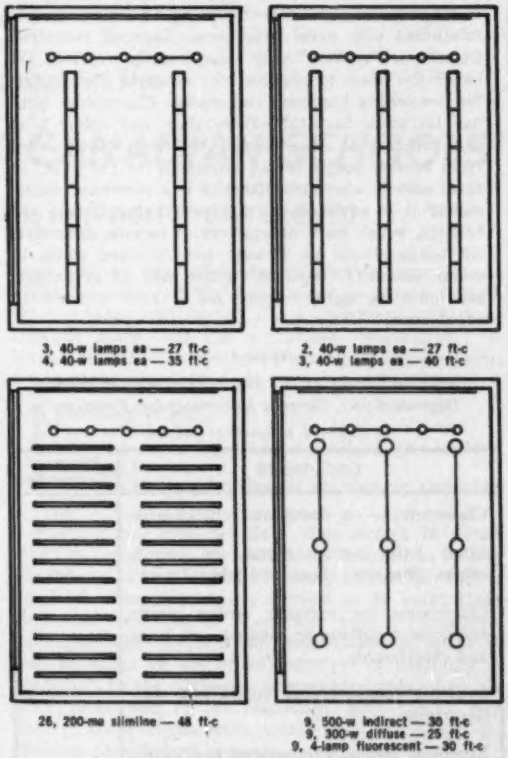
According to the Ontario meteorological records 60 per cent of all school days are "dark" days. In spite of all efforts to get daylight into the classroom there are times when its value on the desks at the right side of the room is as low as 5 foot-candles. We have made tests of classrooms employing bi-lateral lighting with clear glass and also of rooms with light-directing glass block fenestration, and in certain cases have found the light level at the inside row of desks to be less than 5 foot-candles. This was with a heavily overcast sky, but with no smoke or dust in the atmosphere.

A specification for a 30 foot-candle minimum level means of course *combined* natural and artificial illumination. The amount of natural lighting, however, is an unpredictable quantity. If we were certain to have as much as 15 foot-candles of daylight on the inside row of desks at all times then we could meet the requirements by designing a lighting system to add a further and equal amount. But we know from experience that we cannot be sure of the natural lighting. Add to this fact the possibility that some classrooms may be used at night for educational or community purposes, and the conclusion is that the artificial lighting system should be able to meet the full requirements *whenever necessary*. If the system is designed to be flexible then it will be possible to use only what is needed at any given time.

Where financial considerations prohibit a complete system it is suggested that the complete wiring be installed, with luminaires for only the dark side of the room where it is certain that night classes will not be held. To install two rows of luminaires (three units each) in a three-row system is perfectly feasible. To install one row of a two-row system, however, is inadequate; for in the first place a two-row system of six units can deliver scarcely 20 foot-candles of illumination.

Fig. 3 illustrates a few typical luminaire layouts with details of type and resulting illumination levels noted.

FIGURE 3
Typical lighting plans for a classroom 23 x 32 and 12 feet high.



Fixture or luminaire types for the classroom are subject to more restrictions regarding allowable surface brightness than are those used for most other purposes. There are three main types, the first two being incandescent (that is, filament lamps) and the third fluorescent (gaseous discharge). They are:

1. *General Diffuse.* This is enclosing glassware. Its sur-

face brightness exceeds the recommended values for classroom lighting, but because of its low cost it is still tolerated provided it may be mounted not lower than 11 feet from the floor. Opal globes for either 300-watt or 500-watt lamps should be not less than 18 inches in diameter.

2. *Indirect.* This type uses the ceiling as a secondary light source, therefore the ceiling must have a matte white surface with a reflection factor of not less than 85 per cent, and it must be maintained so. Indirect luminaires are quickly affected in efficiency by dust, and must be kept clean constantly. The "silver-bowl" type is less affected than are other types and requires a little less maintenance.

3. *Fluorescent, Semi-Direct.* These may be open, or enclosed by diffusing glass or plastic. If open, they should be louvred or shielded so that bare lamps are not seen at normal viewing angles. They should be suspended about 10 feet from the floor. For very low ceilings they may still be employed provided the side panels are not too bright. Where mounted low it is usually best to employ the type having all four lamps in a horizontal plane rather than in a U shape, as this minimizes side panel brightness. Louvred industrial fixtures or "troffers" may sometimes be recessed between the joists to produce very effective illumination for low-ceiling basement classrooms. Fluorescent light has no more harmful effects than any other kind and, contrary to some reports, the fluorescent powder from broken lamps is not poisonous to the skin. In rural schools where maintenance is a somewhat casual matter it is advisable to use instant-start lamps and ballasts, which have no starters to become deffective. All lamps should be 40-watt and standard white in colour. So-called "daylight" lamps have no advantage, are lower in light output, and a little ghastly in appearance.

Chalkboard lighting is mainly justified by the fact that any general lighting system that will produce a given level of illumination on the desks will produce only half that amount on the vertical or near-vertical surface of the chalkboard. Supplementary lighting is therefore required.

The most effective system, that is the one delivering the greatest amount of illumination for the lowest power consumption is one consisting of the reflector or projector type lamps. The equipment which holds the lamps (sockets, fittings, etc.) may be fully exposed for especially low-cost installations, or it may be surface mounted with concealed wiring, or it may be fully recessed flush with the ceiling and concealed by louvres. Where 150-watt projector-flood or reflector-flood lamps are used they should be aimed at an angle of 25° to 27° from the vertical, spaced approximately four feet apart, and the distance from the front wall should be approximately .70 of the height from the horizontal centre of the chalkboard to the ceiling.

Other types of equipment involve the use of prismatic lens plates or silvered glass reflectors. Information about these and costs can obtained from reputable electric equipment distributors. These units must be installed according to the manufacturers' printed instructions.

In all cases it is essential to obtain units that will be rigid when installed so that they can not be put out of correct adjustment during replacement of lamps or cleaning. Ordinary clamping devices are seldom satisfactory.

The *American Standard Practice for School Lighting 1948* is a very safe guide for the lighting of classrooms by both natural and artificial means, with this reservation—that we have yet to learn more about daylighting in our latitude and climate. It hoped that the studies currently undertaken by the Hydro's lighting research group will produce data that will be translated into reasonable specifications for the guidance of designers.

Table I

Lighting Levels at the Work (Maintained after Depreciation), Current Recommended Practice

LOCATIONS	Minimum Footcandles
Classrooms — on desks and chalkboards	30
Study halls, lecture rooms, art rooms, offices, libraries, shops and laboratories	30
Classrooms for partially seeing pupils and those requiring lip reading—on desks and chalkboards	50
Drafting rooms, typing rooms and sewing rooms	50
Reception rooms, gymnasiums and swimming rooms	20
Auditoriums (not for study), cafeterias, locker rooms, washrooms, corridors containing lockers, stairways	10
Open corridors and store rooms	5

Table II

Recommendations for Limits of Brightness Ratios in Schoolrooms

LOCATIONS	Ratio
a. Between the "central visual field" (the seeing task) and immediately adjacent surfaces, such as between task and desk top, with the task the brighter surface	1 to 1/3
b. Between the "central visual field" (task) and more remote darker surfaces in the "surrounding visual field," such as between task and floor	1 to 1/10
c. Between the "central visual field" (task) and the more remote brighter surfaces in the "surrounding visual field," such as between task and ceiling	1 to 10
d. Between luminaires or windows and surfaces adjacent to them in the visual fields	20 to 1

Today in some European countries a percentage of the cost of a building is set aside for sculpture and painting that is integrated with the structure.

This illustration from a school in Switzerland shows the use of both sculpture and mural painting.

Recent Developments and Departures in the

*PLANNING OF MODERN CANADIAN SCHOOLS**

ERIC R. ARTHUR, PROFESSOR OR ARCHITECTURE, UNIVERSITY OF TORONTO

WHEN I had the honour to speak to you, in St. Louis, three years ago, my topic was a general one like, "School Building in Canada". That paper was no strain on me to prepare. The topic set me today is more specific. I have been asked to present in any manner I wish "recent developments or departures in the planning of modern Canadian schools".

To be frank with you, my research has indicated no recent developments or departures, but I hasten to assure you that our school buildings continue to be the liveliest and most interesting of all our post-war buildings, and their improvement in plan, construction and aesthetics is the concern of many of our best architects. School building in Ontario can be divided roughly into two phases—the period of stagnation when schools were symmetrical in plan, and Gothic or colonial in external expression—and the post-war period when we were all concerned primarily with artificial and natural light, and vision generally; with a more colourful, cheerful school and with acoustics. In Ontario, the new era was heralded, in a remarkably successful report on Schools published in 1945. Bilateral lighting, and the classroom with three outside walls had long been tried in England, but we had regarded the English schools as somewhat visionary. It came as a shock to us to know that Illinois had followed the English examples, and soon the floors of Crow Island were muddy with the feet of Ontario architects and, on any school day, a pilgrim from Canada could be seen with his light meter in Rugen School. No one today will likely build a classroom with three exposed sides, but the principles demonstrated at Rugen School still form the basis of all our planning. I take those principles to be—

1. Flexibility of plan.
2. Freedom from the tyranny of symmetry.
3. The master plan conception of anticipated growth.
4. Bilateral lighting.
5. The single storey building, at any rate, in elementary schools.

Nothing has changed since then except in detail. The news of directional glass block reached us by way of Texas; and of outside window baffles by way of England. The glass block allowed us to build classrooms on each side of a corridor with a consequent saving in cubic contents and mechanical equipment. It had no effect on the broad principle of flexibility in plan, but, in the antiseptic atmosphere created by the glass block wall in the classroom, new, human, psychological problems were introduced, for which Dr. Harmon provided no answers.

Our Canadian climate is not as varied as that of the United States, but we build schools in areas as rigorous as James Bay, and as salubrious as Vancouver Island. Consequently, we have been uninfluenced by the open corridor of the Californian and Texas School. From coast to coast, we tend to conserve heat—and reduce costs. Perhaps our greatest contribution to school

**From address delivered to the Association of School Business Officials, October 15th, Toronto.*

design is in the field of construction where we have experimented with steel and laminated wood; with concrete block, and plywood for external walls. Our educational authorities keep us on a sound economic basis by recommending that 50% of the elementary school area be used for instructional purposes. In the Secondary school, the instructional target is 40%. Notwithstanding our concern for economy, the cost of schools in Ontario, in fire resisting construction stands at $12.-$14. a square foot, or about 80c a cubic foot in 1951. In British Columbia, all wood schools are being built at a cost of 50c a cubic foot, as of last week. Mr. Berwick of Vancouver, who is doing such schools writes me "the schools are planned as follows. All lavatories and heating units form the central core of the building. Classrooms spread from the centre on a 4'-6" module allowing the complete use of plywood in 4'-0' sheets. On exteriors, stucco or siding may be substituted for plywood. Building units are separated by fire segretation areas." In looking at a price of 50 cents a cubic foot, one has to remember the milder climate of B.C. and the savings in heating and insulating.

Since I last spoke to this Association, three important landmarks in school building can be recorded. One is the "Guide to School building in Ontario." This is our Bible. It has never been published except in this limited form, or I should be happy to distribute copies to you. The modest individual who prepared it is Mr. J. A. G. Easton, the Technical Director to the Department of Education. This same civil servant appealed to the Ontario Association of Architects for assistance in those remote areas where one-roomed schools would be built without benefit of architects. They might be built by local builders or by community effort. The Association met the challenge with an admirable little school. Architects here will be interested to know that the rugged individualists who have received these plans are reluctant to use them. In spite of the limited variations of space in such a school, the School Board prefers that its individual requirements be given detailed consideration.

Our most recent project, in which the Ontario Association of Architects is again collaborating with the Department of Education has to do with the graphical layout of fixed utilities and built in equipment in special rooms. The drawings, when completed, will be available to those who can use them to the greater glory and efficiency of science, shops and home economics.

School planning is not confined to the design and construction of school buildings. The extent to which a nation provides schooling has much to do with national development, and one might say that schools may be one of the chief factors in the development of international understanding.

In the United States and Canada, we are inclined to take the matter of schooling as an accepted fact. In general, the compulsory school age is 5 to 16 with optional attendance in free schools to age 18. The result is that approximately 16% of the population is in attendance at publicly supported elementary and secondary schools in both countries.

It is evident that physical plant to accommodate 16% of the population represents a tremendous investment, especially when it is remembered that the investment for teaching and operation will be much greater. Schooling depends principally upon good teachers, but good school buildings and facilities are essential if teachers and pupils are expected to work effectively.

Much has been said and published in the post-war period regarding the need for schools. It has been represented as a national crisis. It is difficult to attract and hold good teachers. Overcrowding, increased enrolment, population shift, curriculum changes, obsolete school plant, etc., harass the school administrator and embarrass the taxpayer.

Altogether we seem to be facing a formidable problem, but a look at other countries indicates how fortunate we actually are. I would draw your attention to a country whose schools built in bomb rubble take precedence over housing or public building. Of another country, whose schools in urban areas may not be built until existing schools are operating on double shift.

And lastly, of one where a planned school building programme involving $270,000,000 per annum is cut to $40,000,000. as all that can be afforded. Every country is acutely conscious of the need for schools, and many are meeting the need by sacrifice in other fields that we would consider essential.

We in Canada and the United States are alarmed because the availability of school plant does not keep pace with enrolment. The reasons for lack of accommodation may be recited briefly as follows:

i. Lack of school construction in the 1930's.
ii. Deferment of school building during World War II.
iii. Lack of material in the immediate post-war period.
iv. Predicted shortage of labour and materials owing to the present defense programme.
v. Rapidly rising cost of construction from $10.00 a square foot, 1949 to $14.00 a square foot, 1951.
vi. Difficulty in selling debentures and increased cost of money.
vii. Obsolescence and lack of adequate maintenance.
viii. Population shift from rural to urban centres.
ix. High birth rate plus immigration.
x. Expansion of curriculum, introduction of special subjects, and increased demand for the inclusion of facilities for community purposes.

The situation in the United States was reviewed by the United States Department of Commerce in January, 1951.

i. Over the decade it will require an expenditure of $13 Billion to meet the accumulated and growing need for adequate classroom space in elementary and secondary schools.
ii. Enrolment will increase at the rate of 1,000,000 per annum from 1950 to 1956.
iii. 230,000 class rooms will be required to meet new enrolment and another 250,000 rooms are needed now to meet overcrowding and obsolescence.
vi. In 1950 the expenditure on publicly supported elementary and secondary schools was approximately $1 Billion. This represents an all time high for volume of school construction. It is about three times that in the 1930's and five times that in the 1920's. If, however, an adjustment is made to compensate for the decreased purchasing power of the $, the volume of work put in place in 1950 is only ⅓ more than the 1925-1929 average, or about the same as in 1939.

v. It will require an annual expenditure of $1.3 Billion over the decade to meet new enrolment and also to make an appreciable gain in replacing obsolete school plant.

vi. All estimating figures are based upon 1949 construction costs.

Our problems here in Ontario are similar to those in the United States. We have much in common including ideas as to school accommodation. We have shared the experiences of depressions and wars, and these experiences have been reflected over the years in our school building. It is unnecessary to dwell on the need for school plant in the post-war period in Ontario since the reasons are practically the same as in the United States.

Since 1945, Ontario has been engaged in the greatest school construction programme in the history of the Province. In the seven years ending December, 1951, 1150 new elementary and secondary schools and additions will have been completed, at an estimated cost of $115,000,000,000. These new buildings provide accommodation for 148,000 additional pupils.

This volume of building has just kept pace with new enrolment, but much remains to be done in terms of replacement to meet obsolescence.

It is estimated that new pupil places will be required at the rate of 25,000 per annum until 1960 to provide for additional enrolment.

The design and construction of school buildings presents a challenge but no problem to the competent school architect. He unfortunately is often bewildered, embarrassed and frustrated by the ramifications of the complete picture. The field of architecture is broad, and the architect does well if he looks after the technical and aesthetic considerations involved in school design. I would like to submit that the educationist should be prepared to furnish detailed requirements regarding space and facilities for school plant required. The architect will then be in a position to design with some hope of meeting requirements. In Ontario, this is done by the Department of Education.

In most cases it is made clear to the architect that economy must be observed. This can and has been done. There is little waste space in today's schools. Sculpture, ornamentation, landscaping, etc., are cancelled in the interests of utility. Space must serve dual purposes viz:—auditorium-gymnasium, cafeteria-classroom, library-classroom, and so on.

All of this has been done and the architect has made every economy even at the expense of cultural and aesthetic considerations which are dear to his heart, and important, if we are to inculcate some appreciation of such things in the pupils.

On the other hand, there is a distinct tendency to increase costs by the introduction of mechanical equipment which can easily cancel any economy in space or structure. Such things as light, ventilation, heat, P.A. systems, power, radio, television, clock systems, fire alarms, telephones, etc., are advocated as essential.

I suggest we have come to think of "essential" as a synonym for "desirable". At the pull of a switch, the mechanical engineer can undo all the economies which the architect has so painfully effected in the structure. I recall, with humiliation, an assembly hall for which I was responsible where I found that it would be possible with electric light to read the Lord's prayer on the head of a pin with the naked eye. When one remembers that ⅓ of the cost of the building goes into the mechanical trades, it is distressing, when it occurs, to see elaborate equipment improperly operated, abused or even immobilized. More than one architect has asked me to say to this influential audience, how unequal, in Ontario, is the maintenance of schools. What training is required of a janitor I do not know, but from what I hear, the standards, especially outside urban areas, are frequently low.

There is one last thing I would say to you. Economy has played so much into the hands of functionalism that our schools may quite pardonably be mistaken, by the layman, for factories or packing houses.

I remember my own school with affection. My American friends in the Association will be pleased to know that it stood in 60 acres of grounds; the stone walls were mellow and here and there was a carving that delighted us as boys. That was in the South Pacific a long time ago, but, today in some European countries, a percentage of the cost of a building is set aside for sculpture and painting that is integrated with the structure. That is something worth striving for.

We have been worshipping false gods, one of whom is functionalism. Functionalism, in its proper place, is but the humble servant of architecture which, in its highest forms, does not ignore the human spirit.

Industry Backs Classes for New Canadians

The more a new Canadian knows about Canada and the better he's able to speak our language, the better citizen he is. The better employee, too.

With this in mind, the Toronto Branch of the Canadian Manufacturers' Association is co-operating with the city's Board of Education in promoting a series of evening classes for new Canadians. Local manufacturers are being asked to draw these classes to the attention of interested employees.

The classes cover basic English, naturalization details, information about Canada and its people and current affairs. They are held two evenings a week in five schools. Lectures are combined with visual aids and group discussion.

A Paradox in Education

Twelve British industrial educationists, members of an Anglo-American Council of Productivity Team, recently returned from a U.S. visit, report that they are both puzzled and impressed by two aspects of American life. They cannot understand how the casual atmosphere of the American schools can produce the dynamic and able men of American industry. They say that they found hard work, perseverance, thoroughness, enterprise and efficiency in American industry, but that in the shcools the level of attainment was not high. There is a lack of self-defined standards, and a casual approach to work by teachers as well as pupils. How this produces the dynamic-able men of industry is to them the paradox of American education.

SOME POINTERS ON HOW TO CHOOSE A SCHOOL ARCHITECT

CHOOSING an architect is much like choosing a doctor or lawyer. It's done on the basis of his reputation. A school board must ask itself, what can this man accomplish for us that warrants our placing confidence in him?

Often a new school in a neighboring community will attract the board, or one of great interest will be seen in an education or other publication. It is quite in order for the board to get the name of the architect who designed such a school from the board that engaged him, and—on invitation—to visit the building and discuss its operation with the appropriate officials.

Some boards assume they can make a suitable choice by soliciting sketches for a new building from a number of architects. This is a mistake. It is unethical for architects to compete with one another on a speculative basis. Even if they were permitted to do so by their profession, it would be a dangerous practice. The board might award the job to a man who was a good artist, but lacked other essential qualities. The result would be disappointing, perhaps disastrous.

If a competition is desired, the board should arrange to hold it under the auspices of the professional Architectural Association of the Province. The necessary machinery was set up several years ago, and works very well.

Once an architect is engaged by a school board there is, of course, nothing to prevent him from preparing all the sketches necessary to decide on a design and establish a cost estimate. Indeed, this is part of his responsibility. But he must be engaged first.

By the same token, no architect can accept a commission if another architect was engaged first, unless assured that the board has severed its connection with the other architect.

If a local man is available, it may repay the Board to engage him. He has the advantage of being "Johnny-on-the-spot" and can render prompt service and more or less continous supervision. On the other hand, the merit of retaining an out-of-town architect, who has made a specialty of school design, should not be discounted. He has a rich background of skill and varied experience upon which to draw.

Similarly, the abilities of a younger architect must not be overlooked. While he may lack some of the qualities possessed by an older man, he has compensation in his fresh and imaginative approach to matters of design. It is often possible for a young architect to associate with an older man, thus combining modern design skill with practical experience.

SOME INTERESTING RESULTS OF A PENMANSHIP SURVEY IN THE SCHOOLS OF THE UNITED STATES

Results of a survey on penmanship conducted among 5,000 heads of grade and high schools in the U.S.A. have been announced by Craig R. Sheaffer, president of the W. A. Sheaffer Pen Company.

The opinions of a cross-section of the school principals were far from unanimous—but 64.4 per cent of them said either "no change" or "better", while 35.6 per cent felt that penmanship had gone down hill.

The reasons most often cited by those who think today's handwriting is better were: improvement in teaching methods, more widespread use of good writing equipment, and the respondents' own unwillingness to give "the good old days" any unearned credit. Even if handwriting quality in schools has merely held its own—and apparently it has done better than that—that represents a real achievement for our schools, in view of the fact that classes are so much larger nowadays.

The most commonly suggested reason cited by those who think penmanship has declined was "the rush of our times", which they said makes for crowded curriculum and allows less time for and less emphasis upon arts such as handwriting.

The survey also showed that quality of handwriting has an influence upon the marks children get in school. Among grade school principals, 89.9 per cent said good handwriting helps produce good marks; the percentage was almost exactly the same among high school heads 89.6.

The high school principals' response to the question "what percentage of your school's pupils attain a 'satisfactory' handwriting by the time they are graduated?—averaged out to about 66 per cent.

With children in both grade and high schools becoming better equipped with fountain pens in recent years, the time-honoured inkwell has been falling into disuse or disappearing entirely from many schools, the survey showed. In high schools now, 91 per cent of the students have and use either a fountain pen or ballpoint, compared to 52 per cent ten years ago.

Many principals mentioned that the ownership and use of good, efficient pens has a stimulating effect on the pupils.

Grade school heads voted nearly two to one that children "learn to write more easily" nowadays. Use of the "manuscript" form of writing—used generally in the first two or three grades only—was the chief reason cited, by 29 per cent of the answers. Better teaching was mentioned by 23 per cent, and better equipment was frequently credited.

The "manuscript" style—it looks like lower-case printing with rounded lines but unconnected letters—is taught in 95 per cent of the grade schools replying. The trend to teaching manuscript writing to beginners has been strong in the last five or six years, but the survey indicated its adoption has been even more widespread than its advocates had thought.

To Protect the World's Cultural Heritage

Unesco has invited all countries to agree unilaterally to safeguard artistic and historical monuments and museums in case of war.

Eventually, Unesco hopes that its proposed international convention will unite all countries in the protection of man's cultural heritage. In the meantime, it has urged individual nations to draw up a "declaration of principles" on this matter.

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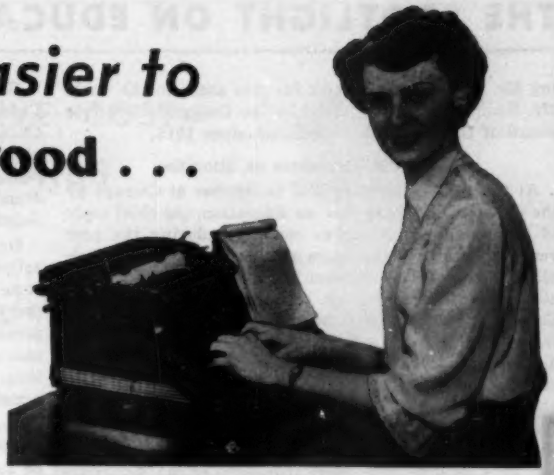

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TIPS ON TEACHING TYPING

by

George Hossfield

10-times World's Champion Typist

Let's stop hampering a beginner by requiring perfection or even near perfection at the start. We must require a degree of accuracy, of course, but let us temper our demands with leniency. The achievement of perfection is a gradual accomplishment; it should not be expected, much less required, from a beginner. Getting accustomed to stroking the keys properly, using the right amount of finger leverage, and remembering the location of the keys to be depressed—these are only a few of the things the beginner has to think about while attempting to do something that is entirely new. After a certain amount of practice a student gradually gains confidence and then you can expect an improved result. The requirement of perfection places the student under an unnecessary tension and strain, which in itself will defeat a student's best intentions. Tension and strain have ruined the chances of more than one trained professional operator so let us not expect the impossible from the untrained beginner.

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THE SPOTLIGHT ON EDUCATION

(Continued from page 18)

ing Mr. Ewart proper credit for this share in the work. Mr. Ewart has been retained by the Collegiate Institute Board of Ottawa as their architect since 1916.

Canada-U.S. Committee on Education

At the 1951 Conference held in October at Chicago by the Canada-U.S. Committee on Education, the chief topic of discussion was a survey conducted during the past year to ascertain the state of knowledge about each other's country as between Canadian and American students. General results of the study showed that Canadian students know more about the United States than Americans do about Canada, but that neither group has an adequate knowledge about the other. Tests conducted in 1950 by J. W. Bouillette of Louisiana State University and David Monroe of Macdonald College, Quebec, showed that students on both sides of the border showed total ignorance of many phases of the other country's national life. More than 53% of the American students did not know the capital of Canada.

Therefore. the committee decided to promote a movement directed largely at newspaper publishers, text book editors, schools of journalism and tourist bureaus to help rectify this situation. They drew up a proposed programme of action accordingly, as follows:

1. American publishes might be encouraged to provide supplementary readers containing stories of Canadian life.
2. The American textbook companies might be urged to publish an increasing number of units in Canada.
3. Border cities might be urged to arrange for the exchange of pupils for short periods.
4. Encouragement might be given to selected universities to sponsor conferences on the mutual problems of Canada and the United States, especially in summer sessions.
5. American universities might be encouraged to invite more Canadian professors for teaching in summer sessions.
6. Publicity might be given, through educational magazines, to curriculum materials on Canada as developed by schools in the United States.

The committee is headed by Dr. James B. Edmonson, Dean of the School of Education, University of Michigan, and Dr. C. E. Phillips, Professor of Education, University of Toronto, co-chairmen.

37th Convention, Association of School Business Officials, Toronto

The 37th Convention of the Association of School Business Officials in Toronto was an undoubted success from every angle. Meeting in Canada for the second time in its history, twelve hundred delegates from practically every state in the union from Virginia on the east to California on the west and in Canada from Saint John, N.B. to Vancouver, B.C., gathered for a three-day programme of addresses and discussions on outstanding problems in school business administration. It was a full schedule of meetings and attendance at all sessions was very gratifying, bearing witness to the high responsibility that all school business administrators feel for their work.

One hundred and ten of the registered delegates were Canadians, the majority of whom, as members of the Ontario Association of School Business Officials, belong also to the international organization. However, representative Canadian school board officials were present from Vancouver, Edmonton, Winnipeg, Montreal and Saint John, N.B.

On the social side, the Board of Education of Toronto, acting as host for the convention, set a standard of welcome that it will be difficult for other cities to surpass in the future. Many delegates from across the border expressed to the writer their very real appreciation of the manner in which Toronto's board members looked after them and made their stay in the city one to be long remembered.

Led by Chairman, Harold Male, K.C., individual board members gave unsparingly of their time and energy to be as useful as possible to the visiting school administrators. Mr. C. H. R. Fuller, Business Administrator of the Toronto Board, and a former Director of the International Association, as manager of the convention, proved the high quality of his administrative ability. His organization of activities left nothing to be desired for efficiency. Many Canadian members took an active part in the convention sessions, including Dr. C. C. Goldring, Superintendent of Schools for Toronto; Dr. J. G. Althouse, Chief Director of Education for the province of Ontario; C. R. Marchant, Business Administrator, Weston; J. A. G. Easton, Technical Advisor, Ontario Department of Education; Professor Eric Arthur, School of Architecture, University of Toronto; H. B. Rockey, Secretary, Board of Education, London; John B. Parkin, well-known Toronto school architect; J. A. MacDonald, Deputy Business Administrator, Board of Education, Hamilton, and Mr. John Dower, Assistant Administrator of the Windsor Ontario School Board.

Significant of the results of this very successful convention was the way it brought home to Canadian school officials the growing importance of the highly specialized department of school business administration whose members are making a very real contribution to the service of public education throughout the continent.

Not the least important of the convention's activities was the exhibit of equipment and supplies which completely filled all available exhibit space. The exhibitors, who are associate members of the Association, took an active part as well in all phases of the convention programme, in discussion groups as well as in social activities. Canadian representation as exhibitors was very gratifying, among them being the following well-known suppliers to the school field: Amalgamated Electric Corporation Limited, Eagle Pencil Company, The T. Eaton Co. Limited, Gestetner (Canada) Limited, Globe Furniture Company, Canadian Johns-Manville Co. Ltd., Livingston Stoker Sales Co. Limited, Gordon A. MacEachern, Minneapolis-Honeywell Regulator Company Ltd., Moyer School Supplies Limited, The Robert Simpson Co. Limited, Underwood Limited, West Disinfecting Co. Limited, A. R. Williams Machinery Co. Limited, G. H. Wood & Co. Limited.

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THE SCHOOL PROGRESS BOOK SHELF

The Function of Music in Education, by G. Roy Fenwick—Gage.

In writing this little book on the function of music in education, Dr. G. Roy Fenwick, Director of Music, Ontario Department of Education, has performed a very real service not only to music as a school subject but to modern education in general. The book takes its title from the first chapter in which Dr. Fenwick discurses the part music has played in community life from earliest times and how it found a natural place in the school curriculum almost from the beginning. It is an inspiring chapter and makes a complete case, in the opinion of the writer, for music as an indispensable subject in the modern school curriculum which aims to educate the whole child, spiritual as well as physical, cultural as well as vocational. The writer recommends this chapter to any educationists as good practical reading in educational philosophy.

The remaining ten chapters tell the story of the development of the teaching of music in the schools of Ontario, and takes the reader right into the schools and the classroom. There are chapters on the course of study, voice training, listening, special activities in music and finally an enthusiastic one on Music Festivals which of late years have become popular in all parts of Canada.

In this book Dr. Fenwick has given educationists a complete review of music in education in Ontario which is not only intensely interesting, but should be very useful to music teachers in the schools of other provinces as well.

Canada's Oil Industry — Imperial Oil Review, August 1951 — free on request from authorized school authorities.

The importance of the discovery and development of the great oil fields of Alberta to Canada and Canadians cannot be over-emphasized. Every boy and girl in our schools should not only be told about it, but should, the writer suggests, study the subject to learn the main facts as a definite part of the course in social studies (geography).

With this object in view, Imperial Oil Limited, which played the leading role in both the discovery and development of Alberta oil, has devoted the complete August issue of the company's magazine Imperial Oil Review to a series of fully illustrated articles on the Canadian oil industry. These articles not only tell about the discovery of oil, about the building of the pipe line and the transportation of crude oil down the lakes to the refinery at Sarnia, but explain the whole picture and its meaning and implications to Canada. In addition to this factual information, the articles also give a very complete review of the types of work in the oil industry. The article, "People Who Bring You Oil" provides a valuable source of information in careers which would undoubtedly be of real value in the guidance department of any school.

The writer suggests that Canadian teachers, especially teachers of social studies should obtain personal copies without delay. It may be a long time before a comparable source of information on the Canadian oil industry is published again, and schools should make sure of getting copies, at least for their libraries, while the supply lasts.

Along Olympic Road, by Foster Hewitt —Ryerson, $1.50.

In Canada's sports world few names are better known than that of Foster Hewitt. Through all Canada and the United States "the voice of hockey" is familiar to millions of sport lovers. Now he has entered the publishing field with a fine book for boys with the central scene, of course, set in the sports world.

Along Olympic Road is an ideal book for the sports-loving boy. It tells the story of a young Ontario boy whose father and grandfather were well-known athletes, and who, in his turn, has inherited a keen interest in sports generally. Throughout his school days the boy is inspired by the example of Syl Apps, famous hockey star of the Maple Leafs, and when a crisis comes in his educational career he goes to his hero for advice. On his advice he finishes his education in spite of attractive professional offers, and finally makes the Olympic Team and wins the Olympic pole vault.

Along Olympic Road is an interesting, wholesome story for growing boys, full of sound advice backed up by true story experiences in the field of amateur and professional sports. It is a book to be put into the hands of any Canadian school boy.

Nutrition for Today — by Elizabeth Chant Robertson, M.D.—McClelland and Stewart, $2.95.

The author of this very up-to-date and practical new book on foods as they affect health is Director of the Nutrition Research Laboratory, Hospital for Sick Children, Toronto, and lecturer in the Department of Paediatrics, University of Toronto.

In her introduction Dr. Robertson expresses the hope that the book may prove to be both interesting and helpful to many people, including public health nurses, teachers, medical, dental, home economics and social work students as well as ordinary housewives and parents. Accordingly, she has made her text as simple and straightforward as possible. Beginning with the discussion of the basic foods, she describes what food factors they contain and explains why we need these factors and how each food in the natural groups com-

pares with the others. The cost of foods and what happens to the vitamins when they are cooked in the usual way are also described. Few technical terms have been used so that the book may be readily understood by laymen as well as professional personnel.

The discussion of foods from the nutritional point of view is covered in the first chapters, followed by tables on meal planning and economical buying, meals for mothers, children and school day lunches, and the whole volume is completed by a special section of tested recipes. This recipe section has been compiled by Mrs. Eustella Langdon who, for many years, has conducted the C.B.C. Cooking School of the Air, and is, therefore, fully authoritative.

It is suggested that teachers of home economics will want copies of this fine practical book on nutrition for their departmental book shelf and should order copies for examination without delay.

Heat, Light and Sound (general physics) by F. Tyler — Longmans, $1.70.

Heat, Light and Sound is the first of a proposed series of three volumes by the author, a well-known English physics master and authority on the subject. In this first volume he provides a solid foundation of "bread and butter" physics in relation to heat, light and sound for the senior high school course. In presenting his subjects he includes as much material on modern developments in each subject as possible, and emphasizes experimental work as the basis on which each subject rests. A large number of examples are provided and specimen results to exercises are given in many cases. Each chapter includes a full range of questions based on the preceding text.

The writer suggests that Canadian science teachers should find a copy of this fine new text of real help and inspiration in their work in physics. It is such a book also as might properly be put in the hands of advanced students in the course.

Know Your Merchandise, by Isabel B. Wingate, Karen R. Gillespie and Betty C. Addison—Harper & Brothers, N.Y., $3.50.

First published in 1944, Know Your Merchandise, is now published in a revised edition bringing it thoroughly up-to-date. It is designed for classes preparing students for business careers in retail selling and for classes in consumer buying. It is suitable for both distributive education and home economics curricula.

Much information on consumer goods is regularly provided by the manufacturers in their advertising, radio broadcasts and on their packaged goods, but most of this information badly needs interpreting. There are two aspects to the study of merchandising information: one relates to the question of

(Continued on page 46)

SCHOOL PROGRESS NEW BOOK LIST

A

Accounting for Secretaries, by Mayne & Crowningshield—Presents theory and practice in its simplest terms with special emphasis on form and procedure. Grade 9-12. McGraw-Hill, $3.50.

Alphabets, by Douglas C. McMurtrie. This manual of letter design is a valuable reference for teachers, students, and artists. New revised edition. McC. & S., $2.00.

Americans Before Columbus, by Elizabeth Chesley Baity. Illustrated by C. B. Falls. Prize winner New York Herald Tribune Children's Spring Book Festival, 1951. Grades 5-8. Macmillan, $5.00.

B

Bear Party. Story and pictures by William Pene Du Bois. Music and dancing, real live teddy bears, beautiful costumes. Grade 1. Macmillan, $2.75.

The Book of Thirty Centuries, by Stanley Rypins. The development of the Bible throughout its long history. Bibliography reference and index. Macmillan, $8.00.

A Bridle For Pegasus, by Katherine B. Shippen. Illustrated by C. B. Falls. A history of flying, from the legendary flight of Icarus to the present day. Grade 8. Macmillan, $5.00.

C

Canada, Land of the Beaver, by Ernest H. Reid. Social Studies Reader for Grades 5 and 6, tracing developments from the time of Columbus to the present. Moyer, $1.25.

Canadians of Long Ago, by Kenneth E. Kidd. Grades 5-8. The story of the Canadian Indian, in terms of their environment and its effect on food, clothing, ceremonies and social life. Illustrated by Sylvia Hahn. Longmans, $2.25.

The Case of the Toy Drummer, by Janet Knox. The Faraday twins solve the mystery of the toy drummer. Grades 6-11. World, 69c.

Cloud Girl, by Olive W. Burt. A story of a nine-year-old Indian girl. Illust. Grades 1-4. McC. & S., $3.25.

Construction Ahead, by Henry Billings. The story of three hundred years of road-making in the United States. Grade: H. S. Macmillan, $3.75.

The Craftsman and the Machine, by J. R. Reeve. The development of industry, from Stone Age to Machine Age. Grade 10 up. Clarke, Irwin, $1.30.

Curious Creatures, by Erna Pinner. A description of unusual animals and birds, and their strange habits. Grade 9 up. Clarke, Irwin, $2.75.

D

David Copperfield, adapted by Moderow. Designed for those with low reading ability. Grades 4-8. Gage, $2.24.

E

The Edge of Danger, collected by Margaret C. Scoggin. A collection of true stories of adventure. Grades 6-12. Knopf, $3.50.

Education and Leadership, by Eric James, M.A., D.Phil. A study of what modern education is, and is not, doing for the brilliant individual who should be the leader of tomorrow. Clarke, Irwin, $1.30.

An Educational Psychology of Learning, by J. W. Tilton. For all students of education. Macmillan, $3.50.

English Composition, by A. F. Scott. A collection of short stories and accompanying exercises on essay-writing. Jr. H. S., Macmillan. Book I, 40c, Book II, 40c.

Essentials of Chemistry, Garrett, Haskins, Sisler. A "general education" course. College. Ginn, $5.30.

Essentials of Experimental Chemistry for the Laboratory and Demonstration, Garrett, Haskins, Sisler. The laboratory manual to accompany **Essentials of Chemistry.** Ginn, $2.95.

F

First Readings in German Masterpieces, Naumann. An anthology of Types of German Literature. Second year college. Ginn, $3.15.

Fujio, by Raymond Creekmore. Story of a little Japanese boy who lived near the great volcano, Fujiyama. Ages 6-8. Macmillan, $2.50.

G

The Golden Bough, by Sir James G. Frazer. This one-volume edition contains the invaluable material of the original twelve-volume edition. De Luxe Edition. Macmillan, $5.75.

Growing Into Reading, by Marion Monroe. To help teachers understand the varied aspects of growth that contribute to success in reading. Gage, $2.80.

H

Handbook of English: Speaking, Reading and Writing, Clark, Davis, Shelley. A comprehensive and practical class text and reference book, first year college. Ginn, $3.15.

History of Ontario, by Margaret Avison. Interestingly written, with a great many illustrative anecdotes. Illustrated. Grade 5. Gage, $2.00.

How the First Men Lived, by Marie Neurath and J. A. Lauwerys. How the first men ate, built homes, tilled the soil, and used tools. Illustrated. Grades 5 to 8. Clarke, Irwin, $1.60.

Huckleberry Finn, adapted by Moderow. Designed to stimulate interest in reading in those pupils with low reading ability. Grades 4-8. Gage, $2.24.

I

Indians, Fire Engines and Rabbit, by Roy Lee. The story of a boy who came to America when the country was young told to a boy of today. Illust. Grades K-5. Little, Brown, $2.50.

Into Your Teens, by Shacter, Jenkins, Bauer. Eighth grade book in the Curriculum Foundation Series Health Program. Illustrated. Grade 8. Gage, $1.92.

Ideas for Junior Grade Teachers, by George E. Tait. A comprehensive teachers' manual of special interest to classes from Kindergarten to Grade 3. Moyer, $1.25.

Intermediate Algebra for Colleges, Rosenbach and Whitman. A gradual, easy treatment of Algebra for students who have had a minimum of Algebra in High School. Ginn, $3.15.

L

A Laboratory Course in Biology, Adell, Welton. High School. Ginn, $2.30.

The Light at Tern Rock, by Julia L. Sauer. Illustrated by Georges Schreiber. A boy spends a thrilling Christmas in a remote lighthouse. Illustrated. Grades 2-5. Macmillan, $3.25.

The Little Magic Fiddler, by Lyn Cook. Illustrated by Stanley Wyatt. The real-life story of the young Winnipeg violinist, Donna Grescoe—9-14. Grades 5-8. Macmillan, $2.75.

Lost in the Zoo, by Berta and Elmer Hader. Illustrated by the authors. Grades 1-8. Macmillan, $3.25.

M

The Macmillan Readers, by Gates, Huber, Salisbury, Clark, Bartlett and Humber, and Peardon. Additional titles: series. Macmillan.

Today We Go. Grade 2. $1.50.

Sharing Adventures. Grade 4. $1.90.

The World I Know. Grade 5. $2.00.

All Around Me. Grade 6. $2.00.

Madame Thérèse, by Erckmann-Chatrian. Notes and exercises by Helen B. St. John. Macmillan, $1.55.

Marianela, Galdos, ed. by Adams. A new edition of a well-known Spanish novel. Ginn, $1.85.

Mathematics, A First Course, by Rosskopf, Aten, and Reeve. A basic course in mathematics to be offered as the first course beyond grade 8. McGraw-Hill, $3.00.

Magda, Von der Vring, ed. by Morgan. A post-war story of high literary quality. Second year college. Ginn, $2.55.

A Man's Life, by Jack Lawson. The story of the early struggles of the author. Grade 10 up. Clarke, Irwin, $1.10.

Mephisto Waltz: The Story of Franz Liszt, by Ann M. Lingg. The story of Liszt the man, composer, pianist and mystic. Grade 9 up. Clarke, Irwin, $4.00.

The Macmillan Readers' Guide, by Gates, Huber, Salisbury, Clark, Bartlett, Humber, and Peardon. Additional titles to this series. Illustrated. Macmillan.

Tales For To-day. Grade 8. $1.50.

Here And Everywhere. Grade 7. $2.20.

New Friends and New Places. Grade 2. $1.50.

Modern Short Stories (Scholar Library), Second Series, selected and edited by A. J. Merson. Grades 10-12. Macmillan, 80c.

Moon Ahead, by Leslie Greener. Two boys act as radio operators on the first rocket ship to the moon. Grades 4-8. Macmillan, $3.25.

Music and the Classroom Teacher, by J. L. Mursell. Written to show how the classroom teacher can deal with music adequately and fruitfully. Gage, $3.30.

N

New Colour for the Canadian Mosaic, by John Murray Gibbon. New types of

immigrants to Canada in an illustrated booklet of the histories of the newcomers. Grades 10-13. McC. & S., - $1.50.

The New Society, by E. H. Carr. A series of six lectures previously heard over the B.B.C. Macmillan, $1.75.

Normandy Treasure Hunt, by Harry Ree. The adventures of a group of schoolboys travelling through France. Grade 10 up. Clarke, Irwin.

Numbers in Action, by Hartung, Von Engen, et al. Through work with action pictures and through manipulative activities with objects, children are led to see the action in number situations, to duplicate the action, to imagine the action and its result, and to think about numbers with understanding. Grade 2. Gage, $1.96.

O

Outdoor Activities for Boys' Schools, by F. J. C. Marshall. A discussion of the general principles which should govern the conduct of organized games. Clarke, Irwin, $1.60.

P

Peter Graves, by William Pene Du Bois. A highly original adventure story. Illustrated by the author. Grades 5-8. Macmillan, $3.25.

Prayers for Children, by Brenda Holloway. A guide for teachers containing over a hundred prayers in simple language. Elementary grades. ' arke, Irwin, 50c.

R

Reference Manual for Stenographers and Typists, by Gavin and Hutchinson. A handbook for transcription students and a desk reference book for working stenographers. McGraw-Hill, $1.15.

Renny's Daughter, by Mazo de la Roche. The twelfth novel in the Jalna series. Grade 8. Macmillan, $3.50.

Rhythmic Writing, by Dr. C. E. Stothers and J. W. Trusler. In this grade 6 book of A Basic Writing Course practice is given in associating definite rhythmic phrases with the movement of the pen as controlled by the muscles of the fingers, wrist, and arm. Gage, 35c.

Self-Expression Through Art, by Elizabeth Harrison. Completely in accord with the modern concept that in the teaching of art self-expression is the aim. Illustrated. Gage, $4.00.

S

Singing Games for Recreation, arranged by Janet E. Tobitt. Books I, II and III. Singing games collected from various sources. Macmillan, 25c each.

Smoke Over Skygak, by Kenneth Gilbert. The adventures of a young forest ranger. Grades 9, 10. Clarke, Irwin, $3.50.

T

The Story of British Shorthand, by E. H. Butler. A scholarly and entertaining study of British shorthand from the earliest times to the present day. Reference Book. Grades 10 to 13. Pitman, $5.00.

The Sun Horse, by Catherine Anthony Clark. Illustrated by Clare Bice. Adventure, fantasy and folk-lore set in British Columbia. Grades 5-8. Macmillan, $3.00.

Teacher's Manual for the Canadian Spellers, Grades 2 and 3, by F. M. Quance. The teacher's handbook for The Canadian Spellers, Grades 2 and 3 gives over-all instruction, and day-by-day lesson helps. Gage, 35c.

Teachers' Manual and Key for Laboratory Course in Biology, Adell, Welton, High School, Ginn, $1.00.

Teak-Wallah, by Reginald Campbell. An account of the author's years in Northern Siam as a Forest Assistant. Grade 11. Clarke, Irwin, $1.00.

This Is The Way, Prayers and Precepts from World Religions chosen by Jessie Orton Jones. Macmillan, $3.75.

Time for Poetry, by May Hill Arbuthnot. A teacher's anthology of 605 poems. Grades 1-6. Gage, $2.20.

Typewriting for Speed and Accuracy, by Dr. John L. Rowe. A comprehensive drill book designed to increase speed and perfect accuracy of typists at any level of instruction. McGraw-Hill, $1.45.

V

Verses for All. Books I to IV. Selected by F. Cope and G. O. Rose. A series of poetry anthologies for primary grades. Clarke, Irwin, each 55c.

W

Watch Out for the Weather, by J. Berke and V. Wilson. Illustrated. Macmillan, $4.25.

We Talk, Spell, and Write. Book 1/1 and Book 1/2, by Monroe, Artley, Gray. These books effectively integrate oral and written expression, spelling, and writing. Illustrated in colours. Grade 1. Gage. Book 1/1, 68c; Book 1/2, 72c.

Wings Over the World, by Cecil Crook. A British Air Cadet tells how he accompanied the Chief of Staff of the Royal Air Force on an inspection flight overseas. Grade 10 up. Clarke, Irwin, 55c.

Y

The Young Sailor (Sportsman's Library), by Guy Pennant. Illustrated. Grade H. S. Macmillan, $2.25.

BOOK SHELF

(Continued from page 43)

what a product is; the other deals with what the product does for the consumer. This book aims to show in clear language what the composition of a product means in its everyday use, and how products can be used most effectively by the consumer. The final aim is to make the student into a good well-informed sales person.

Know Your Merchandise in the new revised edition is divided into two parts: Part 1 dealing with textiles of all kinds; Part 2 non-textiles covering the fields of leather goods, jewelry, cosmetics, household utensils, chinaware, etc. It seems evident that here is an authoritative book which should be available to all classes studying the subject of merchandising.

Hendry's "CTS" Move-About Desk Surpasses All Others

This brand new model—originated and manufactured in Canada—is the most outstanding achievement in the modernization of classroom furniture. Its compact and graceful design, strong construction and ultra-smart appearance create a seating unit without equal for the equipment of any school building.

The "CTS" Move-About is a perfect combination of chrome tubular steel frame and "Aerobond" (7 Ply) wood parts in natural finish.

Produced with box tops and lifting lids, or open bookshelves, and in sizes to suit any grade.

SIZE	Size of Top	Height of Top	Height of Seat
No. 1	26 x 20 inches	30½ inches	18 inches
No. 2	26 x 20 inches	29½ inches	17 inches
No. 3	25 x 19 inches	26½ inches	16 inches
No. 4	25 x 19 inches	25½ inches	15 inches
No. 5	24 x 19 inches	23½ inches	13½ inches
No. 6	24 x 19 inches	21½ inches	12 inches

Please write for prices, stating particulars of your requirements.

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H

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AUDIO-VISUAL AIDS FOR THE SCHOOL

The Visual Education Department in Vancouver

The Vancouver Board of School Trustees opened a fine new administrative building housing all the administrative and supply offices of the school system this summer past. Among the services which took over thoroughly modern premises was the audio-visual education department which had worked with the architect and the builder in planning their own accommodation. Needless to say, they have something special in the way of visual education service to the schools.

The new offices are a vast improvement on the visual education department which was launched in 1937 in two small rooms in the old administration building downtown.

They have been provided with acoustically treated ceiling and specially designed cabinet facilities built by the Vancouver School Board workshops.

Under this environment the clerical staff take care of the routine processes necessary in supplying the teachers a well balanced diet of audio-visual aids. In this regard the Department has endeavoured to create a library of varied material from model villages to sound films.

For the convenience of teachers there is a preview and demonstration room acoustically treated and equipped with display space and tack-boards making this an ideal centre for training teachers in the operation of equipment and the use of various types of aids. Teachers who wish to hear their recordings, which have been selected from a library of over 4,000 records, before preparing their lessons may use the facilities of a sound-proofed record playing booth.

As there are certain types of aids that a department of this nature should prepare themselves, provision was made for two laboratories equipped with fluorescent lighting, sinks, and working space for the production of microscopic slides, model villages, charts, picture sets, and titles.

As the Vancouver School Board has always felt a close alliance between photography and Visual Education, darkroom facilities were provided for the carrying out of various photographic techniques.

This section consists of a photographic studio, complete with background drapes and tack-board, in which many assignments such as preparing slides or publicity photographs may be carried on.

Adjoining this is a room specially equipped for copying and preparing filmstrips. A constant voltage regulator and special outlets provide even illumination for all types of photography requiring the use of lights.

Three darkrooms make easy the accomplishment of all regular photographic processes and in addition the preparation of photographic stencils and microfilm copies.

All developers and solutions are prepared by the staff in a chemical mixing room equipped with storage cupboards and a laboratory sink. Prints may be delivered through a light tight opening into the drying room. This room with its fluorescent lighting and built in storage facilities provides a convenient work room for the drying, trimming, and mounting of photographs.

In a convenient location across the corridor is the Department's equipment storage and service room where the various types of equipment used throughout the schools may be adequately serviced by a trained technician.

Unesco Reviews Instructional Film Development

The cinema's adroitness in enlarging details, speeding up or slowing down action, and giving varied presentations of its ideas, gives it immense possibilities as a means of instruction. It can, for instance, convincingly crowd into a few minutes the ever-continuing movements of the planets, or the life-story of an animal. Despite its obvious value, however, the instructional cinema concentrated mainly on amusing their public or giving them mystery stories. Apparatus was expensive, production costs were high, and as many people as possible had to be pleased in order to meet expenses and make a profit. A few brought out instructional films, but they were of little value.

Nevertheless, little by little, the educational film began to come into its own. As long ago as 1920, the production of special films for schools and universities in America, Great Britain and France had already begun. Other countries followed their example. The USSR was the first to show how the systematic use of films could play an important part in instructing illiterate people.

Two big steps in the history of the documentary were the setting up of film units by the Empire Marketing Board in London in 1928, and by the British Post Office. The latter formed a nucleus of outstanding technicians such as Cavalcanti, Grierson and Basil Wright. The Post Office unit's first task was to make films which would encourage people to use post office services to the full; the resulting productions were true forerunners of the documentary as we know it today.

But when hostilities broke out in 1939, the use of educational films in

Europe was still far from what one would have wished. Teachers were rather sceptical as to their value; difficulties of production were another obstacle, for the commercial film industry had been disinclined to collaborate with the different organizations producing educational films. Now, to help the war effort, it did so, and there was rapid progress in this new and infinitely more varied use of the camera for technical training, general information and army instruction.

Also, for the first time, the problems of visual aids were studied as a whole. Films—silent as well as talking—posters and other means of visual information began to be used as supplementary methods of instruction.

Next big turning point in the history of the educational film was the adoption, during and since the war, of the 16-mm. film. This was considerably easier to use, and much cheaper, than the 35-mm. which previously had been virtually the only size employed. Also, as it was not inflammable, safety precautions presented fewer difficulties.

Specialization now ceased to be a luxury. Production could meet the most varied needs. There were rapid increases in the number of short documentaries, dealing with the most varied of subjects — geographical, cultural, artistic, scientific—for which there was an ever-increasing demand. Schools and universities called more and more for the moving image to illustrate their instruction, while groups were formed to take the cinema out of the commercial rut.

Since the war, one of the educational film's biggest achievements has been in the vast underdeveloped parts of the world where the technical progress of our civilization has by no means fully penetrated. The film is an indispensable aid in the Fundamental Education campaigns carried out under the auspices of Unesco. Mobile 16-mm. units visit the most isolated areas where attempts are being made to raise the standard of living, and show eager speculators how to make the best use of their resources, and generally improve their health, homes and means of livelihood.

There is no doubt that the cinema's rôle in the many spheres of education, science and culture will become more and more important as technical progress becomes more widespread—and as its costs drop. Will the persuasive power of the pictures one day largely supplant the personally spoken word in instruction? Perhaps it is still too early to ask this question.

New Entertainment Films

Arrow Films Limited announces that they have just added a series of full feature length films to their well-known school library. Among these films are such favourites as Peck's Bad Boy, as well as The Jungle Book and Elephant Boy of the famous Rudyard Kipling Jungle Book series.

A full list of the new features and services offered by this well-known film library may be obtained by writing to Arrow Films Limited, 214 Adelaide St. W., Toronto.

Americans at Work—Filmstrip Series Adapted from the Film of the Same Name E.B.F.

Encyclopaedia Britannica announce a new series of filmstrips adapted from their film *Americans At Work*. Under the general titles Farming and Fishing, there are six strips in the first category: Wheat Farming, Corn Farming, Truck Farming, Cattleman, Orange Farming, Irrigation Farming; and two in the latter: New England Fishermen and Shell Fishing.

A study of the important work done by farmers and fishermen in providing the nation's food is, of course, a basic and important one in the schools to-day.

These filmstrips have been slanted specifically at the middle grades for use in geography courses, social studies and history.

The original motion pictures have been exceedingly popular in the educational field, and these filmstrips may be used as supplements to the films either as introductions or reviews.

The *Americans At Work* filmstrips are black-and-white, average about sixty frames in length, and incorporate

the built-in teaching aids that have characterized and popularized EBF filmstrips in the past.

National Committee for Visual Aids in Education for England

Teachers' visual aids groups are to have a voice in national counsels in England. This welcome decision, announced in the New Year, has now taken shape; a new central committee of serving teachers, elected by the groups in each of 12 regions, will be formed as part of the National Committee for Visual Aids in Education, so that specialists in the use of visual aids may have a hand in shaping policy. Plans for the committee have been approved by a conference of some 500 educationists. The approved draft leaves room for future adjustments; and the new committee itself will largely determine its own character. Obviously there are difficulties ahead. Consideratons of cost make large membership impossible, and will restrict the number of meetings. The new committee, which has been planned to meet a long-felt need, should be able to dispel any doubts of success especially if regional co-operaton is strengthened. Each region should be something more than an arbitrary line round a number of small groups which do not know each other.

New Jam Handy Catalogue

Aids for Teaching, a new supplemental catalogue of discussional filmstrips produced by The Jam Handy Organization is currently being mailed to dealers. Social studies, reading, reading readiness, health, nature study, physics, mathematics including geometry, algebra and graphs; science, both elementary and secondary, and shop training are included in the filmstrips listed. All are designed to fill existing needs. They have been tested in actual class use and reviewed by curriculum experts, classroom teachers and audio-visual specialists. The films also provide source material for teachers for enrichment of units of study.

The catalogue, prepared by the School Service Department of The Jam Handy Organi-ation, lists approximately 500 individual filmstrips. Films in full colour include "At Home and School with Tom and Nancy", "Animal Stories", "Introduction to Fractions", "Health Adventures" and "Water Life". Copies may be obtained from any office of General Films.

Children's Film Organization Created in United Kingdom

An organization known as the Children's Film Foundation has been formed in the United Kingdom for the production of new films for young people. The Foundation is in effect a collective undertaking by the entire British film industry. Its president is J. Arthur Rank, and the director of production will be Miss Mary Field, well known for her previous work in children's films.

It is hoped that producers, exhibitors and distributors will contribute between them an annual sum of £60,000 to the Foundation to finance its work.

S.V.E. Educational Catalogue Revised

Completely modernized in conception and design, the new Educational Catalogue of filmstrips and slides produced by the Society of Visual Education offers a wide range of material on diversified subjects.

Each item is preceded by short, concise, and accurate statements outlining content and general utilization in reference to the curriculum.

Dozens of illustrations, representative of the style used in all the material, have been used throughout the catalogue.

Every filmstrip and slide in the new 68-page publication has been carefully selected for top quality of content and reproduction. A copy of the catalogue will be mailed gladly upon request.

New Encyclopaedia Britannica Films

A full-colour motion picture designed to develop interest in ornithology among school children and to instruct them in the rudimentary differences in various general types of birds, has been announced by Encyclopaedia Britannica Films, Inc.

This new film entitled, "Birds Are Interesting", is intended for use in elementary classrooms and for nature study groups. It divides birds into simple classifications and shows how physical characteristics of birds are adapted to the way they live and hear.

A three-reel version, "Sunrise Serenades", studies unique calls and dances of three species of grouse in the U.S. and Canada.

New Motion Picture Camera

The new 70-DL 16mm motion picture camera developed by Bell and Howell features a new parallax-correcting viewfinder. The new viewfinder is adjustable to correct for parallax from 3 feet to infinity. A new brighter image optical system shows a brilliant image of the field. Telescopic-type optics provide extreme sharpness and increased contrast over full image area. Other features include a new focusing eye-piece; new clearance for wearers of glasses, positive type finder, and new measuring mark.

Feature Length Motion Picture Films of Famous Novels — General Films Limited.

General Films Limited, with offices across Canada, announce a selected list of feature length films on literary classics which should be of very special

Light that's right

for OFFICES, SCHOOLS, and STORES

GENERAL ELECTRIC

Diplomat Luminaire

Here is a fluorescent luminaire that is as efficient as it is attractive.

Used in offices, the Diplomat floods desks with soft light that does not tire the eyes. In schools, it gives youngsters plenty of shadowless, glare-free illumination that rivals nature's lighting. Installed in stores, the Diplomat brings out the hidden beauty of merchandise, helps to attract more customers.

Besides these advantages, the G-E Diplomat has many mechanical features that reduce overall costs.

Equipped with twist-type sockets mounted with slot up, so lamps cannot fall out . . . wire-way cover is held in place by four screws with slotted holes for easy accessibility . . . lamps shielded by means of steel louvers and etched, ribbed glass. Steel end plates perforated to give luminous appearance . . . lamps can be easily replaced from top or bottom without removing glass. Hinged louver quickly lowered for maintenance.

The Diplomat is available for ceiling or suspension mounting in continuous rows or single units, for use with two or four 40-watt fluorescent lamps. For further information, contact your nearest C-G-E office.

CANADIAN GENERAL ELECTRIC COMPANY
LIMITED
Head Office: Toronto — Sales Offices from Coast to Coast 51-FJ-1

interest to schools. The presentation of this new series lists twenty-two films among which are worthwhile favourites such as Black Beauty, The Lives of the Bengal Lancers, Anna and the King of Siam, The Last of the Mohicans, The Song of Bernadette, etc.— all motion picture dramatizations of this famous series, many of which fit right into the course of study in English.

Interested schools should write to the nearest office of General Films or head office at Regina for a copy of the descriptive folder giving full details on the complete series.

Sergeant Bruce Reporting — a Traffic Safety film by Lumbermens Mutual Casualty Co., 100 Adelaide St. West, Toronto, or any office of Associated Screen News.

The Lumbermens Mutual Casualty Company have completed the production of a new Traffic Safety Film series which should be very useful to Canadian schools in teaching safe driving, and safety generally on the streets for pupils of all ages. The first showing in Canada was to a gathering of traffic safety engineers from industrial companies and police representatives. These men were much taken with the value of the film in the promotion of safe driving generally; a very important problem in present day living.

The series contains thirteen separate six-minute talking pictures each dealing graphically with one aspect of safe driving. Each one is an interesting lesson in itself for young and old alike, on both safety and courtesy.

These very useful films are now available to Canadian schools. A line to the Lumbermens Mutual Casualty Company or Associated Screen News will obtain an attractive illustrated folder giving full details regarding securing their showing for schools either to classes or adult groups.

The Story of the Nativity—Colour slidefilms — Knowledge Builders — from most Visual Aid Supply Houses.

Knowledge Builders announces the release of a new full colour sound slidefilm entitled **"The Story of the Nativity".**

The filmstrip contains 40 frames of brilliantly coloured paintings by Alice Nicholson Seacord and illustrates the dawn of the Christian Era. The story has long needed this type of visualization, so that all children may have a better understanding of the importance of the birth of Our Saviour.

The story is based on the King James version of the Gospels of St. Matthew and St. Luke. The picturization begins with a scene of the City of Nazareth — the home of Mary and Joseph, the carpenter. We soon learn from the Roman soldier of Herod's decree to go and be numbered. Then follows the Biblical story of the events surrounding the Nativity, ending with the Flight into Egypt.

The Starlight Story — Filmstrip on Tuberculosis, National Film Board, Ottawa.

The Starlight Story, a filmstrip about tuberculosis intended mainly for Indian audiences, is now finding a far wider audience among other groups, particularly school children.

Drawn in colour by Jimmy Simpkins, creator of the "Jasper" cartoons, the filmstrip introduces an Indian family, Marie and Joe Starlight and their four children. Joe, a good trapper, provides well for his family, and all seem healthy except one child who sickens and dies.

When spring comes to the Northland, the Starlights go to the annual treaty gathering where agency doctors have arranged for an X-ray survey. Marie's X-ray photographs show signs of T.B. She does not feel ill but when the doctor explains that she is exposing the children to the disease, Marie agrees to go to hospital. Joe visits her there and finds that she is recovering and learning about the cause and cure of her illness. Overcrowding is unhealthy, she tells her husband, and he promises to add a new room to their cabin.

When Marie returns home she knows that plenty of fresh air, rest and good food are the best defence against tuberculosis. She is a wiser mother, resolved to protect her family against ill health.

New Classroom Screen for Daytime Projection

A new classroom Projection Screen which permits movie and slide projection in lighted rooms is announced for the Visual Education field by the Radiant Manufacturing Corporation after three years of scientific and laboratory research.

With the Radiant "Classroom" Screen, blinds and windows may be left open and normal ventilation retained at all times in rooms where darkening equipment is difficult or too expensive to install. Now the teacher has complete audience control and the students may make notes during projection, while the material is fresh in mind. Supplementary visual aids may also be used during projection.

The "Classroom" Screen has an unbreakable, wide-angle projection surface and is equipped with doors which protect the surface and permit easy, safe storing. The Screen measures 43¼" x 43½" closed. The viewing surface measures 40" x 40". The total weight is less than 22 pounds!.

One of the most important features of the "Classroom" Screen is the tilting chain at the top of the Screen. This unique device makes it possible to tilt the Screen so that the entire audience can enjoy the perfect viewing angle.

MANUFACTURERS & EQUIPMENT NEWS

Appointed Sales Manager for Northern Ontario

The firm of Gordon A. MacEachern, Floor Finishing Specialists, announces the appointment of Earl P. Killoran in charge of sales, Northern Ontario Division.

Mr. Killoran is a floor finishing engineer and his experience with this well known company will prove invaluable in the services and sales of their products, which includes soaps, waxes, floor finishes, floor machines, etc.

Mr. Killoran will make his headquarters at Sudbury, Ontario.

A Coloured Pencil Package for School Use

The Venus Pencil Company announces the production of a new medium priced coloured pencil package for use in school work such as map colouring, art and craft work, which should be very welcome. These are quality pencils with thick leads designed to do all the work formerly done by crayons, but in a much more satisfactory and efficient manner. They are available in packages of six and eight primary colours which provide all the necessary colour combinations for most school art work. The first of these packages have been made available in the province of Quebec where they are growing rapidly in popularity. As these pencils are produced specifically for school use, the company makes a special offer to interested schools that, on request from an authorized staff member of a school making the request on the school letterhead, they will forward a sample package for trial. Those interested in obtaining a sample package should write to the Venus Pencil Co. Limited, The Queensway, Toronto.

Community Recreation in the School

The Brunswick-Balke-Collendar Co. of Canada Limited have issued an interesting brochure entitled, "Community Recreation in the School," which school officials will be interested in obtaining. They may do so by writing to the company's head office in Toronto and asking for a personal copy.

The brochure tells the story of what is being done in modern schools to develop not only recreation for students, but for the community at large. It provides plans of possible recreation centres and tells how various communities have organized clubs to the distinct advantage of everyone concerned. There is no doubt but that schools and communities are getting closer together all the time on the community recreation level, and the writer suggests that this brochure will be found interesting and useful by school and recreation officials generally.

A School Project Kit on the Oil Industry

A school project kit is being made available free to school teachers by The British American Oil Company Limited. The cardboard kit consists of fully-colored models of all the major phases of the oil industry.

A 14-page booklet, "The Story of Oil", is issued with each project kit. This booklet, written in language readily understandable to students, takes them, with their teacher as guide, through an oil field and refinery.

The cardboard models, a brightly-colored assortment of derricks, storage tanks, railway cars, and even an oil tanker, measures 60" by 40" when put in "village" form. The set of models comes in four large cardboard sheets which children can cut out and assemble.

This project kit was pre-tested among a number of school teachers and most enthusiastically recommended by them before being produced in quantity.

It is available, free of charge, to teachers interested, by writing to the Public Relations Department, The British American Oil Company Limited, Toronto, Ontario.

"Colour Dynamics for Schools" — On the scientific use of colour in school decorating—free on request to Hobbs Glass Ltd., Fleet Street, Toronto.

An attractive, 4 colour, 20 page booklet outlining colour-correct painting for schools is now available in Canada.

Entitled "Colour Dynamics for Grade Schools, High Schools and Colleges", this booklet describes a painting system for schools based on the scientific use of the energy in colour. It specifies, and illustrates, correct colour schemes for most types of classrooms, and separate sections are devoted to hallways, stairwells, laboratories, vacational rooms, auditoriums and cafeterias. This booklet will be particularly useful to Architects, Engineers and School Boards contemplating new construction or redecorating.

Floor Treatment

Exceptional resistance to traffic wear is a feature of the new Westwax for high gloss floor finish. A water-soluble wax which dries in 20 minutes, Westwax leaves a high gloss finish without buffing or polishing. It is designed for use on all types of floors including varnished wood, linoleum, rubber or composition tile and terrazzo. It has good anti-slip properties and has been listed by the Underwriters' Laboratories. Full particulars may be obtained from West Disinfecting Co. Ltd., Montreal or Toronto.

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BRIGHTER
CHALKBOARD
FOR
LIGHTER
AND
BRIGHTER
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Sterling "Litesite" Chalkboard is manufactured from long-fibred Canadian asbestos and Portland Cement formed under tremendous hydraulic pressure.

The resulting chalkboard body is uniform, free from defects and has a negligible coefficient of expansion.

The backing is thoroughly kiln-dried and then moisture sealed.

Hundreds of installations in all types of schools in all sections of Canada over a period of more than 20 years are the best proof of enduring quality.

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New West All-Purpose Cleaner

A new All-Purpose Cleaner, combining the advantages of an all vegetable oil soap with those of a synthetic detergent and an alkaline polyphosphate water softener, is now being marketed by West Disinfecting Company, officers in Toronto and Montreal. Producing both very good foam and excellent detergency, the West All-Purpose Cleaner is formulated for efficient action in hard water as well as soft, either hot or cold, for considerable savings in time and labour.

As its name implies, the new cleaner is designed for practically any cleansing operation, including scrubbing, mopping and washing all types of floors, woodwork, painted walls, windows, and other comparable surfaces. Economical and easy to use, it is ideal for schools and similar institutions.

West All-Purpose Cleaner is recommended for use in relatively high dilutions, some applications requiring as little as one part of the cleaner to 45 parts water (or 3 ounces per gallon of water). When stronger concentrations are required, such as 16 ounces per gallon of water for cleaning particularly dirty floors, the product is claimed to be highly effective yet absolutely harmless to floor surfaces. In hard water, it can be diluted 10 to 1 without clouding or loss of foaming or detergency properties.

Since the new West product is less alkaline than many scrub soaps, it is claimed to be completely safe for use as directed. As a carefully balanced formulation of soaps and detergents, uniform in manufacture, it accomplishes a thorough cleaning without leaving a residue or film when applied to surfaces.

For additional information on West All-Purpose Cleaner write West Disinfecting Company, 325 Dalesford Rd., Toronto 14.

Knife Grinding Attachment for the Delta 8" Jointer

The Delta Power Tool Division of the Rockwell Manufacturing Company announces a new knife grinding attachment for the Delta 8" Jointer. This device makes it possible to resharpen blades without removing the cutterhead from the machine. Woodworkers consider it a real saving in time and effort and a great improvement over the former method which involved removing the cutterhead and sending it out for knife resharpening.

To facilitate installation, the Delta 8" Jointer is furnished with table drilled and tapped to receive the attachment. Proper grinding angle can be easily obtained by placing a pin through the stop bar into the end of the head. A star wheel accurately adjusts the grinding wheel to any desired position, and a ball crank handle guides it across the knives evenly and without vibration.

Use of the knife grinding attachment for the Delta 8" Jointer makes possible precision grinding in a short time — thus avoiding lengthy work delays.

Further information regarding this machine and its attachments may be obtained by writing A. R. Williams Machinery Co. Ltd., 64 Front St. W., Toronto.

Brochure on Floor Maintenance

"Floor Maintenance", an authoritative, attractive 12-page brochure just released by The Tremco Manufacturing Company, Toronto, will undoubtedly be of particular interest to those concerned with such problems in schools.

Illustrated by numerous photographs, diagrams and drawings, "Floor Maintenance" not only presents a complete, effective and economical programme for the care of wood and concrete floors, but also for terrazo, linoleum, tile, etc.

Points discussed in detail include wear resistance, appearance, sanitation, cleanliness, light reflectance; the use of sealers and hardeners, burnishing and buffing, waxing; the painting of concrete floors on, above or below grade.

"Floor Maintenance" may be obtained from Tremco representatives or will be mailed on request to The Tremco Manufacturing Company, Canada (Limited), Toronto, Ontario.

New Lathe Attachment Catalog

More than one hundred and sixty different attachments and accessories for South Bend Lathes, Drill Presses and Shapers are illustrated in this new 35-page, 8½" x 11" Catalog No. 5102. Several new items are catalogued, including some recently developed attachments not previously announced. Although these attachments and accessories are designed primarily for use on South Bend Machine Tools, many of them can be easily adapted to other makes.

A copy of Attachments and Accessories Catalog No. 5102 will be mailed on request from A. R. Williams Machinery Co. Ltd., 62 Front Street West, Toronto.

New Office Machine Punches and Reinforces Loose-leaf Sheets

Every user of loose-leaf paper will be glad to hear of this new office machine. With its use, holes are punched and reinforced in one simple operation with the Target Punch-Reinforcer. Thus the tedious, time-consuming task of hand reinforcing papers for binders and files has been eliminated. The sturdy steel Target Punch-Reinforcer is simple to operate. Just insert the paper, press the lever and holes are punched and permanently reinforced from rolls of strong adhesive-back tape. If no reinforcement is desired, the machine can be used as a simple punch.

A two-hole model is now available and a three-hole model is now being developed for distribution by the end of the year.

The manufacturers state that Target Reinforcement Tape costs so little that eight sheets can be reinforced for only a penny. The machine is so designed that new tape can be inserted quickly and easily in a matter of seconds.

The Target Punch-Reinforcer is the exclusive product of the Stationers Supply Corporation. For further information and the name of your nearest distributor, write direct to the company at 82 Wall Street, New York 5, N.Y.

New Sanitation Handbook Offered by Huntington

Huntington Laboratories, Inc., announces the release of a new Sanitaton Handbook which includes information about the maintenance of all modern building products. This 48-page book also lists and describes many of the sanitation and maintenance products manufactured by the company.

The colourful new handbook is prepared for quick reference by the custodians of schools, colleges, hotels, YMCAs and other institutions, as well as for use in flour mills, bottling plants, and all types of industrial plants.

The new book is available on request through Huntington representatives or may be ordered direct from the Toronto office, 72 Duchess St., Toronto.

New Soap Dispenser

A new V-T toilet soap cake dispenser has recently appeared on the market that has much to recommend it for school use.

By a unique but simple process the cake of soap is pulled against patented roto-blades which pulverize just enough soap for a single washing.

The V-T Soap Master dispenser delivers as high as 1,000 washings from a single cake of V-T toilet soap. The soap is claimed to give instantaneous lather even under hard water conditions.

The tough plastic dispenser case in a clean white finish will not rust or corrode and never has to be painted.

It is refilled easily and quickly with no waste of time, labor or soap.

A patented feature of V-T Soap is a V-groove which permits air currents to pass through and keep the centre of the cake dry.

Details may be obtained from Moyer School Supplies Limited in Toronto, Ontario, or any branch office.

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Above is pictured a modern school cafeteria equipped with "Stan-Steel" nesting chairs and tables.

Give every student the advantage of scientifically designed classroom furniture. The "Stan-Steel" fully-adjustable desk has a rigid tubular steel frame and is built in two sizes to accommodate students from first grade to university.

Size No. 1: Desk height of 23"—26", seat height of 12½"—14¾" and seat to desk clearance of 11½"—13½".

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The name "Stan-Steel" is your guarantee of the finest in modern classroom furniture.

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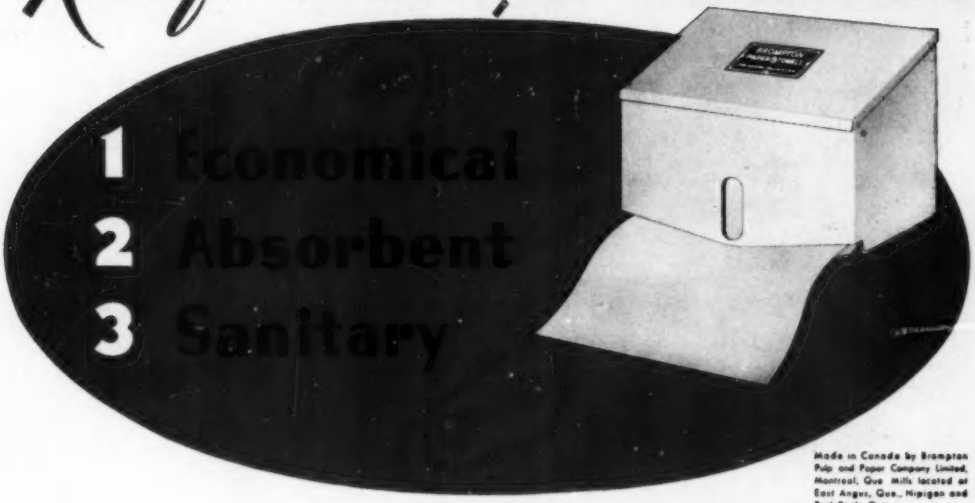

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